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# A MANUAL OF NURSING

PREPARED FOR THE TRAINING SCHOOL FOR NURSES, ATTACHED TO BELLEVUE HOSPITAL.

NEW YORK
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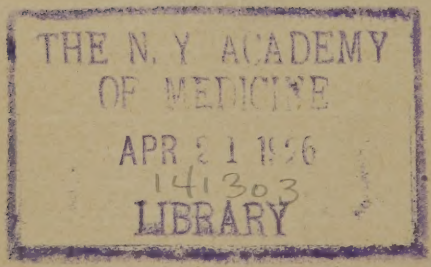
PREPARED

FOR THE TRAINING SCHOOL FOR NURSES ATTACHED
TO BELLEVUE HOSPITAL

NEW YORK
G. P. PUTNAM'S SONS
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1882

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# PREFACE.

NO one in writing a book on nursing could fail to use some of the ideas of Florence Nightingale in her "Notes on Nursing," and as Miss Lee's delightful book on "Hospital Sisters" has been read and re-read by us, we naturally have borrowed some of her good directions.

We received most cordial permission from Zepherina Veitch (Mrs. Henry Smith), the author of "A Handbook for Nurses," and from Dr. Edward J. Domville, who wrote a "Manual for Hospital Nurses," to use these admirable books in the compilation of our manual. Use has also been made of Moffat's "Manual of Instruction for Nurses."

We feel indebted to Dr. Mary Putnam Jacobi

for her kindly interest, and also to Dr. Victoria White, to whom really belongs the credit of editing and compiling this manual. Our one wish is that it may prove useful to those who are earnestly studying to become good and efficient nurses.

FOR THE COMMITTEE OF THE TRAINING SCHOOL FOR NURSES ATTACHED TO BELLEVUE HOSPITAL, NEW YORK.

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A

# MANUAL OF NURSING.

## CHAPTER I.

### QUALIFICATIONS OF A NURSE.

IT was not very long ago that the work of nursing the sick was considered to belong to those who were incapacitated by age, feebleness, or blighted hopes, for the more active duties of life. But in these latter days let the sick take courage. This forlorn train of sick-room spectres is disappearing before the bands of the young and hopeful, to whom life has not lost its charm, who are ready to devote themselves in their youth and strength to this work of humanity. It is no light task that they are willing to perform. There is, perhaps, no calling in life which demands a more constant exercise of all the Christian virtues than that of nursing the sick.

Those who contemplate devoting themselves to this work should consider well that fatigue and discomfort are inseparable from the lot of the nurse. They should also bear in mind the many calls that will be made upon their patience, forbearance and kindness. Those who

would have the control of others must ever preserve the most perfect self-control, and behind this self-control, there must be firm principle. Any manifestation of temper on the part of the nurse is inexcusable, no matter how trying the circumstance which occasioned it. No real service which the nurse can render should be thought menial or disagreeable; for the comfort and well-being of those in her charge constitute the one object for which she labors.

In many cases a favorable result depends as much upon the faithfulness of the nurse as the skill of the physician, and equally certain is it that an inefficient and careless nurse will thwart the efforts of the best physician.

Truthfulness and honesty are necessary in one who is entrusted with the responsibilities which devolve upon the attendant of the sick. Habits of punctuality and order are all-important; if these are wanting there will be haste, distraction and much vexation of spirit which will re-act unfavorably upon all, and be fatal to the regular and systematic succession of duties, upon which the comfort of the sick so much depends.

A nurse should observe most conscientious reticence with regard to anything of a personal or domestic character, in the affairs of her patients, with which she may become acquainted. Nothing that can really affect the patient's interest must be withheld from the physician; but beyond this, let the nurse refrain from speaking of her patient except in that general way which is remote from even the suspicion of gossip.

The better the general education, the better the foundation for the professional training necessary to make a

skilled nurse, and ample opportunity may be found for the use of even high intellectual attainments. A more intelligent interest in the work is thus insured which will conduce to the content and cheerfulness of the nurse, and so to the comfort and well-being of those under her care. Let it be remembered that the care which the nurse gives her patient will often decide the question of life or death, and her calling will then assume the dignity which really belongs to it. But, setting aside this question, is it a slight thing to be able to lessen the amount of human suffering? The assurance that she can do this, the desire to do it most wisely and well, will lead the true nurse to qualify herself by careful study and practice for the best performance of her work.

Good health is indispensable for the proper discharge of the duties of a nurse, which are always more or less arduous. Skillful fingers are very desirable, and activity without noise.

The best age to begin the study of nursing is from twenty-five to thirty-five years; it would be a very exceptional case in which it could be successfully commenced after the age of thirty-five.

### DUTIES OF A NURSE TO HERSELF.

*Personal cleanliness.*—To insure personal cleanliness a bath once a day is essential. It is a good plan for a nurse to take a cold sponge-bath in the morning, and to wash thoroughly with warm water at night. A nurse should always have clean hands, especial care being taken

to cleanse them thoroughly with a disinfectant solution after dressing any wound.

*Dress.*—The under linen should be changed entirely twice a week. The outer dress should be clean and neat, simply made of calico or some washable material. The dress should never be long enough to touch the floor, or be extended by crinoline. Aprons, cuffs, collars and caps, should be frequently changed. A nurse should not serve the meals of patients wearing the same apron as when she dressed wounds, &c. High-heeled boots are out of place in the sick-room. The hair should be plainly dressed, well combed up from the neck behind, with an absence of artificial pads or ornaments.

*Care of her own health.*—While the nurse should be faithful and conscientious in the discharge of her duty to her patients, she should not forget that her own health demands that she should observe all possible hygienic regulations.

It is important that the nurse have regular meals and regular sleep. As a rule, she should sleep seven or eight hours out of twenty-four. We have already spoken of the cold sponge-bath in the morning; this is chiefly desirable for its tonic effect, the warm bath in the evening being recommended for cleansing purposes. With few exceptions, some portion of every day should be spent in the open air. Nurses are apt to get careless about these matters, partly because they do not realize their importance, and partly because of the frequent difficulty attending their observation; and when the health begins to suffer, they resort to the use of stimulants, hoping to keep up the strength by the use of strong tea and coffee,

or alcoholic stimulants. This course is one which is most injurious to the health. Let the nurse but realize this, and she will find that with a little management she will usually be able to follow the above simple rules of hygiene.

### INSTRUCTION FOR NURSES.

Until within a few years it has not been considered at all necessary that nurses should receive any training for their work, but now the attention which the subject demands is being given to it, and nursing is becoming the subject of special education.

*Duration of training.*—Fully two years' time is necessary to enable one to become thoroughly skilled in the art of nursing. The usual course of instruction in the training school requires attention in three different directions: First, to the proper condition of the room, as to light, warmth, air, cleanliness of bed, furniture, and all utensils; Second, to the care of the sick themselves; Third, to superintendence and household management.

Candidates for admission should be taken on probation for a month. During this time they will be appointed to the commonest ward duties—making beds, dusting, attending to personal cleanliness of patients, preparing bandages, assisting the nurse in dressings and other necessary duties.

If the month has been passed satisfactorily, the probationer will then enter upon the regular course of training of the school, comprising instruction on various subjects connected with the special duties, elementary instruction

in the anatomy of the human body, in physiology, with reference to a knowledge of the leading functions of the body, general instruction on medical and surgical topics, chemistry of common life, particularly of air, water and food, on diet, and cookery for the sick.

## CHAPTER II.

### CONCERNING HOSPITAL MANAGEMENT.

*SUPERINTENDENT.*—For the proper management of all that pertains to the care of the sick in a hospital, there must be one capable and responsible woman as Superintendent over the whole establishment, and all the nurses should be under her supervision in grades, according to their several abilities. The duties of the Superintendent will vary in different institutions, according to the size of the hospital and other arrangements. She will direct the instruction of the nurses, or have an assistant appointed for that purpose.

Each ward should have a head nurse, and assistant nurses according to the number of the patients.

*Duties of head nurses.*—The head nurse should always accompany the attending physician in his visits, and should know the condition of every patient under her care. She should know what patients are in need of special care and attention, and be sure that they want nothing. She should also know what patients are convalescent, and able to assist in any light work of the ward, which knowledge she can only obtain from the physician.

The diet of the patients will be prescribed by the

physician at the regular rounds, but the head nurse will see that these orders reach the proper authorities, and that any special diet is served to the patient at the appointed hours.

She will see that the medicines are administered as prescribed.

She will daily inspect the ward closets, making sure that all utensils are faultlessly clean, and that there are no hiding-places for soiled linen or old bandages.

She will see that the ward supplies of basins, towels, urinals, soft rags, lint, soap, bandages and disinfectants are not wanting, reporting any deficiency to the appropriate person.

She will instruct her assistants in making beds, airing beds and bedding, and in removing at once all soiled linen from the ward, consigning it to the appointed place.

She will arrange the order and method of the ward work.

The temperature and ventilation of the ward will receive her special attention.

The night nurses will be appointed by the Superintendent.

*Requirements of nurses.*—The nurses will be required from time to time to make a written report of certain cases in which are noted the pulse, temperature, respiration, kind and amount of nutriment taken, and hours of the same, hours at which medicines have been administered, character of evacuations, with observation of any changes which have been noticed in the condition of the patient.

They will be examined as occasion requires, that their theoretical knowledge of the branches which they are studying may be tested, as well as their skill in bandaging, and in the use of the various appliances of the sick room.

### CARE OF WARDS.

*Cleanliness.*—The wards of a hospital must be kept absolutely free from dust. The dust of a ward is made up of organic impurities and the germs of disease, hence the importance of its careful and thorough removal. To accomplish this object it is not necessary to do much sweeping. Soft hair brooms may be sometimes used, taking care not to raise the dust, but to move it gently before the broom. To effectually remove the dust damp cloths or sponges are necessary. The floors should be washed at least twice a week, the other wood-work and the windows once a week. Carbolized water should always be used in cleaning the wards.

"Eternal vigilance" is necessary to keep the beds in a proper condition, and free from dust, vermin and filth. It is the duty of the head nurse to make sure that infected beds are taken out of the ward as soon as the patient leaves. The blankets and all the bedding from these beds should be washed and disinfected.

All beds, bedding, blankets and pillows should be frequently exposed to the open air and sunshine.

Before putting away the clothing of patients it is necessary that it be thoroughly cleansed, or it becomes a fruitful source of contamination. The duty of the nurse

should be to put the clothes in packages, labeled with the patient's name and number, and send them to the steaming room.*

Ward bedside tables, if made of wood and painted, will admit of frequent washing, or they may be covered with muslin. In any case they must be kept clean.

Bed pans and chamber utensils should have special shelves, and only be taken into the ward when required. Whatever passes from a patient should be at once removed, and the vessel itself rinsed, first with cold, then with carbolized water, before being returned to its place.

The water-closets must be carefully looked after, and kept perfectly clean and free from smell. The stationary basins and sinks also need attention to keep them clean. Papier maché basins and pails are light and convenient, but are objectionable from the fact that they soon absorb impurities and become unfit for use. Glass should be used for all possible purposes.

The soiled linen should be taken at once from the ward to the laundry. Covered zinc-lined baskets are useful

*Though the patient may not be suffering from any infectious disease himself, it is impossible to say what may have been the state of the people about him before he was brought to the hospital. If the nurse has any reason to think he has any infectious complaint, such as erysipelas, or any of the infectious fevers, her duty becomes more urgent to have the clothes instantly removed. In such a case she will probably receive from the doctor directions for isolating the patient. She must take care to wash her hands well with soap and water and some disinfectant solution before touching any other patient,—a precaution which may be well taken in every case, even though there is no reason to suspect infection.

for this purpose. Articles requiring disinfection should be put in separate baskets and so labeled. Each quantity of soiled linen should be accompanied by a check or list, showing the number of articles, and the ward to which they belong. Soiled dressings may be put temporarily in a glazed earthen-ware bucket with lid, in the bath-room, but even here they must not be allowed to remain long. They must be soon burned, and the jars in which they are kept should be thoroughly carbolized each time they are emptied. Some disinfectant, as chloride of lime, should be constantly kept in these vessels.

### BEDS AND BEDDING.

*Kind of bed.*—Light iron bedsteads are the best, such as are in common use at the present day. If practicable, it is a good plan to have two beds near one another, that the patient may have one for the night and one for the day. Where this is done the nurse must remember that the second bed will need to be warmed in many cases before the patient gets into it.

*Mattress.*—The woven wire bed is superior to all others for hospital use. Over this a pair of blankets may be spread, which can be frequently washed, or a light straw mattress which can be emptied, washed, and freshly filled for every new patient.

*Pillows.*—The pillows may be made of hair, feathers or straw.

Chaff pillows are very useful in surgical wards. It is a soft pillow, susceptible of being moulded to any re-

quired shape, is always ready, and has this advantage that it can be easily renewed.

*Sand bags.*—Sand bags should likewise be kept on hand. It is advisable to have them of different sizes, varying from one to four feet in length, and of proportionate thickness.

*Preparation of bed for patient.*—In preparing the bed for a patient, after the under sheet has been adjusted it is necessary in many cases to arrange a rubber sheet or draw sheet in such a way that no blood or other discharge could possibly reach the under sheet, as it is often important that that should not be frequently changed, while it is absolutely necessary to remove any soiled clothing from a bed as quickly as possible.

The draw sheet should be the same width as the sheet, to give room for its being tucked under the mattress on each side, and about a yard long. It can readily be withdrawn from under the patient when soiled without changing the under sheet.

Care must always be taken to keep the sheet on which the patient lies smooth and free from crumbs. Neglect to do this is a frequent cause of bed-sores.

*To change the under sheet.*—To change the under sheet without removing the patient from the bed is in many cases a difficult operation, and one which will require the help of one or two assistants. The nurse should first loosely roll the clean sheet, leaving enough unrolled to cover the bolster ; she should then free the soiled sheet carefully at the head, rolling it in under the patient, until the bolster is clear. Then cover the bolster with the clean sheet, and roll it under the patient until the clean

and soiled sheets are close beside one another, just under the shoulders. She should then work both down together, unrolling the clean sheet as she rolls up the soiled one. In many cases the patient will be able to raise himself sufficiently to let both sheets pass. Where this cannot be done, those helping will pass their hands under him, giving as much aid as necessary.

In many cases where the patient can be turned from side to side the under sheet may be changed by rolling half of the clean sheet lengthwise, instead of as before; then roll or lift the patient to one side of the bed, loosen the soiled sheet, pressing it close to the back of the patient; cover this side of the bed with the clean sheet, over this the rubber sheet and draw sheet may be laid, having previously rolled them in the same manner as the under sheet. Then the patient can be rolled back to this side of the bed, the soiled sheet removed from the other side, and the under sheet, rubber sheet and draw sheet adjusted.

*To change the upper sheet.*—To remove the upper sheet it is only necessary to take care not to chill the patient. Remove all covering from the patient but the sheet and one blanket, then lay the clean sheet over these and a blanket, after which let the soiled sheet and blanket be removed from underneath.

## VENTILATION AND TEMPERATURE.

*Importance of ventilation.*—Air which has been contaminated by the breath and other exhalations is no longer fit to meet the wants of the body. Every one will be

ready to acknowledge that to live we must breathe; few seem to realize that it makes any difference whether the air we breathe be pure or foul. Death would result from no air at all, but foul air can support life for some time, though it be at a "poor, dying rate", and at this rate many are content to exist. They make no effort to get rid of the foul and poisoned air of their dwellings, seeming rather to try to prevent its escape, while they fear instead the effects of pure air, regarding it as an enemy to be shunned.

*Sources of bad air in the sick room.*—Foul air is really more injurious to the sick than to the well, for with the latter its effects are somewhat counteracted by the pure air which they will usually get out of doors some time during the twenty-four hours; but the sick often remain for weeks in the same room, where they drag on a miserable existence, breathing over and over again the air which has been made foul by the breath, exhalations from the skin, from the evacuations of the bladder and bowels, from discharging wounds, and various other sources, until they themselves, as well as the clothing, furniture and walls become thoroughly saturated with noxious gases. The attempt is never made to thoroughly drive out this vile air, and to furnish in its place an atmosphere which is not lacking in the life-giving element, oxygen. Popular ignorance and indifference in regard to ventilation, a subject at once so vital and so simple, is as astonishing as it is profound.

*Cold air not always pure.*—Some confound the subject of ventilation with that of temperature, thinking that if a door be opened into a hall where the air is cold, that

that is all that is necessary, forgetting that cold air is not always pure, nor pure air necessarily cold. To harmonize these two essentials of pure air and a comfortable temperature, is the object at which we should aim.

*Cold air not dangerous.*—The fresh supply of air may be previously warmed before it is admitted to the room, but while this is sometimes done, and is in a very few cases desirable, it is seldom that the admission of cold air is a disadvantage, and its invigorating effects are often beneficial. The patient should not be in a draft, and sufficient clothing may be put on the bed, that there will be no danger of taking cold, even in the coldest weather.

*Night air.*—A foolish prejudice also exists, in many minds, against night air.* The difference between day and night air lies in the fact that the former is modified by the sun. Too much cannot be said of the value of sunlight in purifying the atmosphere, acting as a direct remedial agency in disease, also in promoting cheerfulness, contributing indirectly to the physical welfare ; but as we cannot travel with the sun, and make a journey to China and back, every twenty-four hours, we are forced to breathe night air, and we are left to decide whether we will have pure or foul night air.

*Oxygen necessary to combustion, also to life and health.*—Oxygen constitutes about one-fifth of the atmospheric air, and is the element so necessary to life and health. The blood comes to the lungs for oxygen, which it takes

* It is true, that in malarial districts certain precautions need to be taken in regard to night air, but such precautions are, under other circumstances, quite unnecessary.

to different parts of the body. A process of combustion is constantly going on in the body, by which we mean the chemical union of carbon and oxygen, forming carbonic acid gas, which is thrown off in the breath. Whenever carbon unites with oxygen, as in burning wood or coal, in the lighted gas jet, the burning lamp or candle, the same process of combustion is going on, and the same product, carbonic acid gas, is being formed. If, however, the supply of oxygen fails, the process ceases. This can be seen by putting a lighted candle under a glass jar. For a short time it burns brightly, then more and more dimly, and finally it goes out. This is because the oxygen has been all used up. So, if we shut ourselves up in a room to which no fresh air is admitted, a similar change takes place. Life is not, usually, entirely extinguished, because a little air gets in through cracks, crevices, and an occasional open door; but all the faculties of the body, physical, mental and moral, become impaired. We become like the dimly-burning candle, which, for most useful purposes, might as well not burn at all.

*Object of ventilation.*—The object of ventilation is to remove the impure air, and to supply fresh air. The means of accomplishing this object are various, consisting of doors, chimneys, windows, and other special apparatus provided for the purpose. There is no better ventilator than an open fire. Warm air is lighter than cold air. As the air of the room becomes heated, it rises up the chimney, then if fresh air is constantly coming in at a window, we have the most perfect ventilation. Ventilating flues are constructed on this principle. They are heated by a fire or gas jet ; the heated air rises, the air

of the room rushes in to supply its place. As the air from the room is removed, air from some other source is drawn in to take its place. It is important to be sure that this air supply be pure. If it is simply cooler air from an unventilated hall or corridor, we fail in securing good ventilation. It must not be forgotten, that for thorough ventilation, opportunity must be offered for foul air to go out and for fresh air to come in.

*Ventilation of hospitals especially important.*—The ventilation of hospitals is especially important, as the sources of contamination of the air are so numerous. In all well-regulated institutions, there are abundant means of ventilation provided, and it becomes the business of the nurse to see that these are made use of. At the same time care must be taken to see that the patients are not exposed to drafts. Screens can be used, as necessary, for protection.

*Temperature of wards.*—Patients who are in bed, are comfortable at a temperature lower than would be desirable in an ordinary sitting-room; it may be allowed to range from 65° to 68° F. It should, however, be warmer than this when the patients are being bathed.

It should be remembered that the temperature of the body is lower at about three or four o'clock in the morning, than at any other time during the twenty-four hours. The night nurse should be instructed to see that patients have more clothing at this time, if desired, and hot bottles should be supplied for the feet, as necessary.

### DISINFECTANTS AND DEODORIZERS.

*Two classes.*—There are two principal classes of disin-

fectants: first, absorbents; second, antiseptics, or those which destroy organic matter.

*Absorbents.*—In the first class are charcoal and porous clay. These absorb deleterious substances in the surrounding atmosphere. The vessels which contain these substances should be frequently emptied and renewed.

*Deodorizers.*—The absorbents act also as deodorizers. There may be circumstances in which it is useful to deodorize, by substituting a harmless odor for a disagreeable one. A good way to do this is to bring into a room a shovel full of hot coals, and to pour on them about two tablespoonfuls of toilet vinegar, taking care, at the same time, to hold the shovel at arm's length. But this in no way takes the place of a disinfectant. The real need is pure air, to take the place of the contaminated air, and as soon as this can be obtained there will be no use for deodorizers. Some people have the idea that a disinfectant, to be really efficacious, must have a strong odor, but in reality some of the best disinfectants are quite odorless, as sulphate of iron.

Quick lime acts by absorbing moisture, and is, therefore, useful to put in damp places.

Slacked lime readily absorbs carbonic acid, as may be shown by putting a saucer of lime-water into a room where this gas is present, or by blowing into lime-water; the clear water becomes milky in appearance, the insoluble carbonate of lime having been formed.

*Substances both absorbent and antiseptic.*—Chloride of lime also readily absorbs moisture, but has a further action as an antiseptic.*

* Sulphate of iron is also an absorbent and an antiseptic.

*Antiseptics.*—Of the second class of disinfectants, or antiseptics, there are certain ones which may be constantly used in occupied wards. Under this head are :

*Those used in occupied wards.*—1. Condy's fluid, a strong solution of permanganate of potassa, which, more or less diluted, may be exposed in vessels through a ward.

2. Solution of carbolic acid, which may be used as above, or sheets wrung out of it may be hung over frames, and these may be placed around the bed of a patient where more complete isolation is impracticable.

3. Chloralum may be similarly used.

*Those used in empty wards.*—The following disinfectants can be used only in empty wards :

1. Chlorine gas.

2. Sulphurous acid gas.

For thorough and complete disinfection nothing is superior to chlorine gas. It is produced thus :

One part of common salt is mixed with one part of black oxide of manganese in a shallow earthen pan. Two parts of oil of vitriol, previously diluted with one part, by measure, of water, should then be poured over it, and the whole stirred with a stick. Chlorine will continue to be liberated for four days. It is necessary while employing it, that the doors, windows, and chimneys of the room, be kept carefully closed for some hours.

A good, and at the same time a cheap way of disinfecting a ward and its furniture, is by exposing it to the action of sulphurous acid gas. All windows and doors of the room should be closed while a stick of brimstone

is burnt within, so as to fill the room with the fumes. Afterwards, the doors and windows may be opened, and the furniture and floor washed with a solution of carbolic acid, one part of carbolic acid to twenty parts of water.

### PREVENTION OF THE SPREAD OF CONTAGIOUS DISEASES.

In a case of measles, scarlet fever, diphtheria or smallpox, one of the first things to be considered is how to prevent the spread of the disease.

It would be a good rule to follow when a child is taken sick, especially if it have fever or sore throat, to keep it away from other children until after it has been seen by the physician, and such communication has been pronounced safe.

A patient with any of these diseases should be at once isolated. Any children in the house should be sent away, as they are more susceptible than adults to external influences. A room at the top of the house should be chosen for the patient. This room should be dismantled of all unnecessary furniture. Carpets and upholstered furniture should be removed. The germs of the disease float in the air and settle on all the articles in the room, especially becoming entangled in the meshes of woolen materials, where they have been known to live for years. The most thorough ventilation of the room should be secured to dilute the poisoned air which the patient has to breathe. This dilution of the poison will also tend to limit the spread of the contagion.

Disinfectants should be used freely. Some disinfec-

tant should be constantly kept in the vessel which receives the discharges from the bowels, or from the nose or throat. Girondin's disinfectant is very good. Sulphate of iron, or some other disinfectant, should be used plentifully in the water-closet. Cloths wet in a solution of chloride of lime, should be hung in the room. The clothing from the bed, or patient, should be removed from the room in a covered jar which contains a disinfectant solution.

The patient should be cared for by a nurse who has no communication with other persons. It would be better that she should wear clothing which can afterwards be destroyed. Diseases are often carried in the dresses of attendants. The hair will require the most thorough washing with a strong disinfectant solution.

After recovery the room, and all articles of furniture, or clothing, must undergo the most thorough fumigation. It is always well to use things that can afterwards be burned without much loss, and in a very malignant case, such destruction becomes imperative.

### PUERPERAL FEVER.

Puerperal fever is one of the most malignant of contagious diseases, and one which, breaking out in a maternity ward, demands the most decided and prompt action to prevent its ravages among the patients. The most complete isolation is necessary. Disinfectants should be freely used. The nurse who has charge of such a patient should have nothing at all to do with the other lying-in women. All articles of clothing, and all utensils, should

not be allowed to come in contact with other patients. The catheter, syringe, and other instruments, should never again be used for other patients. It is impossible to disinfect them so thoroughly that such use would be safe. Carelessness in this direction is one of the most frequent causes of the spread of this dreadful disease.

## CHAPTER III.

### OBSERVATION OF THE SICK.

*IMPORTANCE of habits of observation.*—It is impossible to enumerate all the points which the nurse is called upon to observe in the sick under her charge; but nothing is more important than that she cultivate habits of correct observation. The Superintendent, or her assistant, should frequently require the nurses to report what they have observed in the cases under their care. She should point out to them what they have failed to notice, and by frequent exercise in this way their powers of observation will become greatly improved. There are many things important for the physician to know, which only the observant nurse can tell him, and there are others about which she can obtain information, and thus be able to give him valuable assistance. Patients are generally ready to converse more freely with the nurse than with the physician, and the opportunities she has of learning about her patient are much better than his. In seeking information from her patient, the nurse must be conscientious and discreet. Let no questions be asked to gratify an idle curiosity. Do not weary the patient with questions when he ought not to talk, unless the case is urgent, or you are requested so to do by the physician.

*Points for observation.*—The following are points for observation, or inquiry :

Date ; name of patient ; age ; sex ; married or single ; residence ; employment ; habits, sober or otherwise ; previous ill-health ; health of other members of family, and, if any be dead, supposed cause of death.

*General description.*—Appearance ; condition ; posture ; weight (alteration in) ; temperature ; notice whether legs, feet, or bowels be swollen.

*Skin.*—Color ; perspiration, general or local ; eruption, situation and duration ; existence of redness ; swellings.

*Alimentary canal.*—Hunger ; thirst ; taste. Lips ; color, moist or dry. Tongue; form, color, dryness, surface, coating. Stomach ; nausea ; vomiting ; eructations ; pain, during, before, or after eating (how soon after), character of pain, sharp, heavy or cramp-like. Bowels ; habitually and at present, as regards frequency of action and character of evacuations ; whether any gall-stones, or worms (thread, round, or segments of tape-worm), be passed.

*Urine.*—Quantity; frequency (night and day) ; color, light or dark ; clear, or opaque ; specific gravity ; sediment, gravel, or resembling mucus, or pus ; smell, normal, or offensive ; pain in micturition, its seat and direction ; pain in the loins.

*Circulating system.*—Pulse, rate, volume ; palpitation ; sensation of pain or discomfort at heart.

*Respiratory system.*—Frequency of respiration ; regularity ; difficulty of breathing ; how affected by position. Cough ; character, hard, dry, incessant, spasmodic, when

worse, on first waking, or on movement. Expectoration; quantity, character, color, odor, tenacity.

*Nervous system.*—General intelligence; memory; speech; slowness of manner; headache (where); giddiness; sleep; dreams; fits; alteration in kind or degree of sensibility in sight, hearing, smell, taste, touch; pupils, large or small, any difference between the two; pain; numbness; tremors; rigors; rigidity; paralysis.

In the case of female patients: menstruation, frequency, duration; pain, before, during, or at the time of flow; character of discharge; profuse or scanty. Any other discharge,—character; amount. If married, number of children born at full term; ages of eldest and youngest; miscarriages, or still-births; possibility of pregnancy.

Anything unusual which may come from the patient at any time, should be preserved for the doctor's inspection, and any event in connection with the same should be reported, and the time of its occurrence.

## UNDRESSING PATIENTS.

To accomplish this object with the least possible pain and annoyance to the patient, requires much care on the part of the nurse.

*Case of broken thigh.*—A case of broken thigh is the most difficult to undress. The injury is in itself a serious one, and is liable to become much more so by rough or clumsy handling. In a case of this kind, the bed clothes should all be turned back to the foot of the bed, and the patient laid in the middle,—having previously taken care to protect the under sheet with a rubber cloth, if the

clothes are dirty. If the patient be a male, remove the coat, waistcoat and collar, as gently as possible. The outer seam of the trouser-leg containing the injured limb should then be ripped up until the trousers are completely open, waistband included. The buttons should then be unfastened (the sheet being first thrown over the patient to prevent unnecessary exposure), and the cut trouser-leg drawn with the utmost care and gentleness from under the whole length of the leg, to the inside, the hand being slipped under the thigh, if necessary, to avoid all dragging. The body of the patient must then be gently raised, sufficient to draw the body of the trousers from under him; the other trouser-leg can easily be drawn off while the sheet is kept over the patient.

The sock or stocking should be cut open down the seam, and the foot drawn off, while the ankle is firmly but gently held without raising the leg, in order to avoid any jarring of the broken thigh.

*Broken arm.*—If the case is one of broken arm, all the sleeves should first be removed from the uninjured limb; then those containing the broken limb gently drawn down, unless it is found the attempt causes the patient great pain; in this case, they should be at once opened up the seam. The shirt-sleeve should always be opened, and in some cases it is desirable to open the side-seam of the shirt as well, both for the convenience of the surgeon, and in order to facilitate the changing of the shirt, when necessary.

*Female patients.*—Any directions that could be given in the case of female patients would have to be modified to suit the greater or less degree of complexity in the

arrangements in individual cases, and here the nurse will often find ample opportunity for the exercise of all the ingenuity she possesses.

In many cases, the dress and skirts may be unfastened while the patient is still on the stretcher, and be drawn down over the feet, with the aid of assistants to gently raise the hips as much as necessary. By ripping the seams partially down toward the hems, the skirts may be lifted over the feet without raising the body, and they will then be as if opened all the way down, the patient simply lying on them, after which she can be transferred to the bed. The drawers and stockings will have to be ripped or cut down, as in the preceding case. If the arm be broken, proceed in the same way as with the male patient.

In all cases avoid injuring the clothing more than is necessary.

### WASHING PATIENTS.

On the admission of any new case, the nurse should inquire of the physician as to the propriety of the patient being put into a warm bath, and if this be not thought advisable she should carefully wash the patient as thoroughly as she can without injury.

Patience, soap and water can do a great deal for the removal of lice. Ointments and washes should be used only under the direction of the physician, as most of them contain powerful drugs, and, if used in excess, are liable to produce injury, especially if the patient be young or weakly. If other means fail, permission to shave the head should be obtained.

All patients should have their faces and hands washed every morning; those in bed should have a damp napkin brought to them after a meal; the feet should be washed twice a week, and each patient should have a warm bath once a week. In many cases more than this is advisable, in others, positively necessary, but less than this should not be allowed in any case. Many patients are able to do this for themselves, but in every case it should be the nurse's duty to be sure that it is done efficiently.

With bed-lying patients the nurse should use screens to exclude draft and observation.

The aim should be to secure cleanliness with the least exhaustion to the patient. Use tepid water and castile soap.

Avoid exposing too much surface at once. First wash face, ears, and neck; next take each arm in turn, then each leg and foot, then the back, last of all, the abdomen.

Use plenty of towels for drying the patient, and friction to promote circulation.

When the skin is harsh and rough from fever, great relief is often experienced from the free use of common soft soap.

The nurse should never give an entirely cold bath, unless it is so ordered.

The hair and teeth of patients must not be neglected.

In baths in which the whole or part of the body is to remain a longer or shorter time, the temperature must be regulated by the thermometer, and the same temperature must be maintained the whole time that the patient remains in the bath, which time will be prescribed by the physician.

Temperature of simple baths.

| | | | |
|---|---|---|---|
| Cold, | 33° | to | 65°, Fahr. |
| Cool, | 65° | " | 75°, " |
| Temperate, | 75° | " | 85°, " |
| Tepid, | 85° | " | 92°, " |
| Warm, | 92° | " | 98°, " |
| Hot, | 98° | " | 112°, " |

### DRESSING PATIENTS.

The body linen of bed-lying patients should be changed at least twice a week, and in many cases more frequently.

The following directions should be heeded by the nurse :

Never begin to change until you have all you are likely to require ready.

Be careful that there is no draft on the patient.

Let the fresh linen be properly aired and warmed beforehand.

Do not move or uncover the patient more than is absolutely necessary.

Begin by removing all sleeves from one arm, then, without moving the patient, put on all that is to go on this arm, then raise the head and shoulders, removing the soiled and adjusting the clean linen well down under the shoulders ; the patient can then lie down, and the other arm be stripped and dressed. After this, the hips can be slightly raised, and the soiled clothing removed, and the clean garments arranged.

Do not let the patients help too much, and, on the

other hand, take care that they do such things as they can and ought to do for themselves.

### FEEDING PATIENTS.

Florence Nightingale says there are four causes of starvation among the sick. First: defective cooking. Second: defect in choice of diet. Third: a want of judgment as to hours of taking nourishment. Fourth: a want of appetite on the part of the patient.

*Object of cooking.*—The object of cooking is to make food digestible and palatable. In the case of the sick, this object must never be forgotten, for with them the food is to be made ready, not for a healthy person, whose digestion can ignore some failings on the part of the cook, but for one whose powers are enfeebled by disease, and for whom the cooking must do a good part of the work of digestion.

*Quality of food.*—In the first place, the food should never be of uncertain quality. If the milk is in that state that suggests sourness, let the patient have some other food, the quality of which is beyond suspicion. So, also, if the meat, beef tea, or eggs, are not perfectly fresh, keep them out of the sick-room. The nurse cannot be too careful about these matters, if she does not wish to so offend the stomach of her patient that it will refuse all food.

Some directions about preparing food for the sick will be given later; but in this connection it is important to observe that the nurse should know when the food is well prepared, and when it is not.

In many cases the food is prescribed by the medical attendant, and in hospitals especially, the nurse may not have much to do with the choice of food, but in any case an observant nurse can easily find out what kind of food the patient takes with the best relish, and so report to the physician. The fact, however, that the patient likes a certain kind of food, should not lead the nurse to persist in bringing him this, and nothing else, till the relish for it is changed into disgust at the sight of it.

*Variety.*—She should always bear in mind that the appetite of the sick is capricious, and that variety in food cannot be dispensed with. The patient should never be worried with questions as to what he would like to eat, but any choice expressed should be gratified if possible.

*Hours of taking nourishment.*—If the nurse takes away the food from a patient untouched, or but just tasted of, she must not leave him without food until the time for another meal, or the same thing will be likely to occur again. Let her, instead, bring to him, at an unexpected time, nourishment of some kind, well prepared, or some little delicacy, and thus spare him the weariness and exhaustion which would have been the result of going without food.

In no case should the food be left by the bedside of a patient to await the return of appetite. There is no surer means than this of banishing all appetite.

Let the nurse ascertain from the medical attendant what quantity of milk, beef-tea, or other food he would wish the patient to take in twenty-four hours, also the quantity of stimulants, if any is being taken; then let

her make a little scale of quantities and intervals, arranging also for medicines. Food for the night must not be forgotten, or the patient will be too weak to take anything in the morning. The amount taken at a time will vary with the individual, and in the same case must often be altered to suit the caprice or necessity of the patient. Sometimes two or three teaspoonfuls every hour is better than a larger quantity at a longer interval. Some require food the moment they wake; others cannot take it till later. Practical experience and good sense will do much to teach a nurse what to do in these various cases.

*Appetite.*—Again, there is the consideration of want of appetite in the patient. If possible he should not see, smell, or hear about food before it is brought to him. The nurse should see that things that are intended to be hot are hot, and not lukewarm. Do not bring a patient warm tea nor coffee, a warm mutton chop, nor warm toast. For anything of this kind previously scald the plates and cups in which it is to be served. Do not let the cups be so full that a part of the contents will be spilled over into the saucer. Bring everything necessary at once, and not let the patient wait for you to go for salt, spoon, or fork. Do not think it will help the appetite of your patient for him to see you taste of his tea or broth to assure yourself that it is rightly prepared. Bring only a small quantity of food at once, and let this be made to look as attractive as possible.

### SPECIAL CASES.

*Fever Patients.*—Patients suffering from fever require

liquid food in small quantities at frequent intervals; often not more than a teaspoonful can be given at a time, which should be given every half hour or oftener.

In feeding a patient who is either delirious or in a stupor, you may suffocate him by giving him his food suddenly, but if you rub his lips gently with a spoon, or gently draw down the lower lip with the forefinger sufficiently to allow the end of the bowl to pass, thus attracting his attention, he will swallow the food unconsciously but with safety.

The patient will be often suffering from thirst when too weak to ask for anything to drink, or even to care to drink when urged, but will be very grateful for a little cool slightly acid liquid which the nurse will put into the mouth. Bits of ice now and then will be taken eagerly.

*Helpless patient.*—Patients that are not entirely helpless will prefer to feed themselves, even though they have to be slow and clumsy in doing it, but the really helpless patient must be entrusted to the tender mercy of the nurse. She should first arrange the napkin well under the chin so that nothing shall drop on the clothing of patient or bed. She must take care that the food be not too hot, and that the mouthfuls she gives him are of convenient size. Above all things give the patient plenty of time. Bring a damp napkin after the meal to wipe the mouth.

*Exhausted patient.*—In a case of exhaustion a small amount of food must be given at a time, usually combined with some stimulant, and frequently repeated. If necessary, both the nourishment and stimulant can be given in the form of enemata.

## PASSIVE EXERCISE.

METHOD GIVEN BY DR. WEIR MITCHELL IN "FAT AND BLOOD, AND HOW TO MAKE THEM."

"An hour is chosen midway between two meals, and, the patient lying in bed, the manipulator starts at the feet, and gently but firmly pinches up the skin, rolling it lightly between his fingers and going carefully over the whole foot, then the toes are bent and moved about in every direction; and next, with the thumb and fingers, the little muscles of the foot are kneaded and pinched more largely, and the inter-osseous groups worked at with the finger-tips between the bones. At last the whole tissues of the foot are seized with both hands, and somewhat firmly rolled about. Next the ankles are dealt with in like fashion, all the crevices between the articulating bones being sought out and kneaded, while the joint is put in every possible position. The leg is next treated, first by grasping the areolar tissue, and last by industrious and deeper pinching of the large muscular masses, which for this purpose are put in a position of the utmost relaxation. The grasp of the muscles is momentary, and for the large muscles of the calf and thigh both hands act, the one contracting as the other loosens its grip. In treating the firm muscles in front of the leg, the fingers are made to roll the muscles under the cushions of the finger-tips. At brief intervals the manipulator seizes the limb in both hands, and lightly runs the grasp upwards, so as to favor the flow of venous blood-currents, and then returns to the kneading of the muscles.

"The same process is carried on in every part of the body, and special care is given to the muscles of the loins and spine, while usually the face is not touched. The belly is first treated by pinching the skin, then by deeply grasping and rolling the muscular walls in the hands, and at last the whole belly is kneaded with the heel of the hand in a succession of rapid, deep movements, passing around in the direction of the colon.

"It depends very much on the strength, endurance and practice of the manipulator how much good is done by these maneuvres.

"At first, or for a few sittings, they are to be very gentle, but by degrees they may be made more rough, and if the manipulator be a good one, it is astonishing how much strength may be used without hurting the patient.

"The early treatment should last half an hour, and should be increased by degrees to an hour, after which should follow an hour of absolute rest.

"The patient should be at once wrapped up as soon as manipulated.

"After the first few days keep the patient constantly lubricated with cocoa-oil. Vaseline is also a good lubricant."

## CHAPTER IV.

### ADMINISTRATION OF MEDICINES.

*MEDICINE closet.*—The medicines should be kept in a locked closet opening from the ward, or convenient to it. It is a good plan to have the closet arranged in divisions numbered to correspond with the beds.

Medicines and lotions should not be kept near each other. If possible, let the lotions be kept in fluted bottles, or those which have some other distinction from the medicine bottles, so that the nurse can tell by touch that she has the lotion bottle in her hand.

*Schedule of hours for administration.*—It is the duty of the head nurse of each ward to administer the medicines. To secure their administration as prescribed, she should keep a written schedule of hours at which they are to be taken, with the amounts. Cards or tablets may be hung over each of the divisions, in which will be, first, the number of the patient, then, the name, then the date at which the medicine was commenced. If the patient is taking several medicines, the nurse, for her own convenience, can label the bottles, A, B, C, etc. Then the cards can be arranged thus :

| *No.*<br>*Name*<br>*Date* | | |
|---|---|---|
| *Hours.* | *Bottle.* | *Amount.* |
| | | |

If any medicine is increased, diminished, or discontinued for a day or two, mention the same with date, and date of renewal. If omitted entirely the bottle should be removed from the closet.

On a slate hanging in the closet the nurse should keep a list of patients who take medicine at the same time, as before meals, after meals, at bed-time. There should be another list of those taking medicines at irregular times, with the hours for the same.

Convalescents will come to the closet at the appointed hours and receive their medicine from the nurse. To those lying in bed the medicine will be brought, always with a glass of water from which to drink after taking it. The head nurse will herself measure the medicines, but her assistant may take them to the patients as she will specify.

*Exact measurement.*—The *exact* quantity of medicine ordered should be measured with the graduated medicine glasses. If teaspoonful or tablespoonful doses are prescribed, she can so measure it, but these are uncertain measurements and ought not to be used.

The nurse should never trust to measuring by the eye. She may think that with certain medicines she can do it with sufficient exactness. But there is no such thing as *exact enough.* It is unsafe to allow the least moral laxity to creep in here. The nurse may think she knows the contents of a certain bottle. It may resemble something she does know about in color, consistency, smell, and taste, and yet be quite another thing, and an overdose often repeated may cause serious injury. If the nurse thinks that the medicine a patient is taking is producing any very marked symptoms, such as vomiting, diarrhœa, pain in the stomach, headache, drowsiness, convulsive movements of the muscles, running at the eyes, nose, or mouth, she should at once inform the medical attendant. And she will often be told by him to watch for certain symptoms, and on their appearance to omit the medicine.

*Cleanliness of glass.*—After medicine has been given to one patient, the glass should always be rinsed and wiped before being used for another.

A separate measure should be used for oily or strong-smelling medicines.

The medicine should never be poured out within sight or smell of the patient, if it is in any way disagreeable to him, and if he takes anything after it, the same should be ready with the dose.

Liquid medicines—with the exception of oil—should always be diluted with water.

*Castor oil.*—The nauseous taste of castor oil is covered by warm milk, or by coffee. Glycerine is another good vehicle for castor oil. First put into the glass the glycerine, in quantity equal to the oil, which you next add,

then add a few drops of some flavoring substance, as spirits of anise, lavender, or tincture of orange peel, and it can be taken without much trouble. Or, put a teaspoonful of brandy into a glass, wet the sides well with it, then pour the oil slowly on to it; on the top of the oil put another teaspoonful of brandy. Before the patient takes it, give him a little brandy with which thoroughly to rinse his mouth, and another sip after he has swallowed the oil, and he will thus be spared tasting the latter.

*Cod-liver oil.*—Cod-liver oil may be given in a similar manner, other spirits may be substituted for brandy. Strong coffee disguises the taste well. It may be easily taken with the froth of porter.

*Volatile medicines.*—When medicines are volatile, they ought to be swallowed the instant they are poured into the glass. The bottle should be immediately corked.

*Effervescing medicines.*—A large glass should be used for effervescing medicines, so that a portion of the dose be not lost.

*Powders.*—Powders should be mixed with a little sugar, water or milk.

*Pills.*—If a patient be unable to take pills, the pill should be put into a morsel of soft bread, or into a mass of any conserve, and water given immediately after. The smaller the pill the greater is the difficulty of swallowing it. Or, the nurse may take a small piece of damped rice paper, or a wafer made for this purpose, and putting this into a tablespoon may fold it round the pill or pills. The spoon may be then filled with water, and placed by the nurse well back in the throat of the patient, who swallows the mass without difficulty.

*Suppositories.*—Suppositories are medicines in a solid form, introduced into the rectum or vagina, generally either to relieve pain, or to act as astringents.

### ENEMATA.

Injections into the bowel are called by this name. They are used for many purposes, and may be either purgative, sedative, stimulant or nourishing.

*Administration.*—The patient should lie on the left side, close to the edge of the bed, with the knees drawn up, where this is possible. The tube of the syringe should be well oiled, and the nurse, standing at the back of the patient, should pass her hand under the sheet and introduce it not more than four inches into the anal orifice upward and backward, holding it steadily there while the syringe is worked. No force should ever be used to overcome any obstruction to the passage of the tube. The injection should be done slowly, with a moderate amount of pressure, and should be stopped at once if the patient asserts that he cannot bear any more.

The fluids commonly used for this purpose are the following:

*Simple enema.*—Warm water, alone, or with sufficient soap rubbed into it to render it creamy. From one to two pints of water may be used.

*Purgative enema.*—Half an ounce or an ounce of castor oil, or olive oil, a dessert or tablespoonful of common salt, or turpentine, added to about a pint of warm water, form the purgative enemata most generally used.

*Anodyne enema.*—Laudanum, added to two ounces of

thin starch or arrow-root, is the sedative injection generally employed. The quantity used is directed by the doctor. The starch or arrow-root should be made with cold water.

*Nutritive enema.*—Nutritive enemata should be always small, for the smaller their bulk the more likely are they to be retained. They should never exceed four fluid ounces. One ounce of very strong material is often sufficient. They should be very slowly injected, so as not to stimulate the bowel to reject them. They may consist of beef-tea, soup, milk, or milk and eggs beaten up together, thickened with arrow-root or corn flour, which helps to retain the enema in the bowel.

*Good way of giving feeding enema.*—An excellent method of giving an enema for feeding purposes, is as follows. Get a glass syringe which will hold not less than three fluid ounces, fill it with the enema which is to be given, attach to the nozzle of the syringe a piece of slender india-rubber tubing, about three inches long, and put into that a tube such as is used for injecting an infant, or a flexible catheter, full size. Press down the piston of the syringe until the fluid escapes at the end of the catheter, which, first oiled, must then be introduced into the bowel, and the enema slowly and gently sent up.

*Precautions.*—In giving any enema, care should be taken to fill the syringe before introducing the tube into the rectum, so that no air be thrown into the bowel. Feeding and anodyne enemata must be pumped up very slowly.

### HYPODERMIC INJECTIONS.

*Hypodermic injections.*—Anodynes, and sometimes other remedies, are now often given by injection under the skin. Magendie's solution of morphine is commonly thus employed, and of this from six to ten minims given at a dose. In introducing the needle, a fold of the skin is to be taken up between the finger and thumb, and with the other hand the needle is to be firmly and quickly passed horizontally to the depth of about half an inch. Then press the piston gently till the marks show that the desired quantity has entered. Take care that there are no bubbles of air in the fluid to be injected.

### PASSING THE CATHETER.

For females the simplest plan is to make the patient lie upon her back, with the thighs separated and slightly drawn up. Having oiled the second finger of the right hand, the nurse introduces it between the labia, just above the entrance to the vagina, where the trained finger will detect the orifice of the urethra; along the finger, as on a director, she slips the instrument (previously well oiled) held lightly in the left hand. Thus the catheter cannot enter the vagina, while it will almost certainly slip into the orifice of the urethra.

Force should never be used if any obstruction is felt to its passage into the bladder. Let the catheter be withdrawn instead, and one of smaller size tried. Once within the cavity of the bladder, the point is felt to move freely, and the urine flows from the catheter.

*To wash out the bladder or inject fluids into it.*—It is sometimes necessary to wash out the bladder or inject fluids into it: for this purpose a syringe can be attached to the catheter, previously introduced. A still better plan is to fit some rubber tubing to the catheter through which the water may flow om a bowl slightly elevated with less force than whe hrown, though as gently as possible, from a syringe.

## CHAPTER V.

### APPLICATIONS.

*DRY heat.*—To raise the temperature of certain parts of the body, and to relieve pain, dry heat is often ordered. It may be applied by means of hot flannels, tins, or bottles filled with hot water, by dry heated bricks, and by bags of heated sand.

*Flannel.*—Flannel being of a loose texture, and involving air in its meshes, is a bad conductor of heat; when heated it should be put together as loosely as possible, and applied in that state to the skin. It should never be covered by a towel, or linen, as that augments its radiating property. White flannel retains heat much longer than colored flannel.

Stomach plates and other solid media for applying warmth to the body should be covered with white or colored flannel, according as they may required to communicate an immediate or intense heat, or to convey a slighter but more permanent stimulus to the part required to be heated.

To apply dry heat to the surface of the body generally, the hot air, or lamp bath, is used. The temperature may be raised from 100° to 160°, according to the requirements of the case.

The patient must have his clothes removed and a blanket thrown over him, a framework should then be adjusted over him by which the bed-clothing may be kept from contact with the body, when it should be covered with blankets sufficient to retain the heated air. The air may be heated by means of a spirit lamp connected with an apparatus which has a tube communicating with the interior of the frame. When everything is ready the blanket covering the patient can be removed. The hot air bath should last about twenty minutes, by which time the patient will probably be perspiring profusely. He should then be dried with hot towels and wrapped in a blanket.

*Moist heat.*—Moist heat may be applied to either the whole or a part of the body. When the former is required the bath should be large enough to immerse the whole of the body as high as the neck.

*Baths.*—The temperature should be tested by the thermometer, and hot water added as necessary to maintain the same temperature while the patient remains in the bath. The medium length of time for the bath is from ten to fifteen minutes, unless otherwise ordered by the physician.

*Hip-bath.*—The quantity of water used for a hip-bath should be only sufficient to fill a little more than one-third of the vessel employed.

If it is required to excite the womb to greater activity when the monthly secretion is defective, the heat of the bath should be as high as it can be borne, but the time of remaining in it should not exceed fifteen minutes.

*Foot-bath.*—As a foot-bath is chiefly intended to cause

derivation, it should be used as hot as it can be borne, and always hot enough to redden the skin of the part immersed.

For applying moist heat locally, fomentations and poultices are used.

*Fomentations.*—For a fomentation, take a piece of flannel a yard square ; put a wringer into a basin, and lay the flannel, doubled into a small space, on the wringer. Pour boiling water on it, and wring it until no more water can be squeezed from the flannel. Fold it the required size, and lay it on the patient, taking care that it is not too hot, although it should be as hot as it can be comfortably borne. Cover with a dry flannel, oiled silk or rubber cloth.

*Turpentine stupe.*—When a turpentine stupe is ordered the flannel should be wrung out of boiling water, as before, and a teaspoonful of turpentine sprinkled on it, care being taken that it is well spread through the flannel, or it will be apt to raise blisters in spots. The nurse should examine the skin from time to time as the fomentation is removed, as turpentine applied too often on the same surface will produce severe blisters, and in some persons the skin is much more susceptible to irritation than in others. In cases of acute pain a teaspoonful of laudanum may be ordered to be used in the same way as the turpentine.

*Wringers.*—Wringers are made as follows: A piece of coarse toweling should be cut into widths of sixteen inches and lengths of thirty-two inches. The sides must be firmly hemmed or bound ; the ends must have a hem wide enough to admit the wringer-stick, which is gener-

ally from four to five inches in circumference. When the wringer is to be used, run the sticks through the hems, gathering the wringer into the middle of the stick. Spread the wringer out in an empty basin, leaving the sticks hanging over the edges; put the flannel for the fomentation in the basin on the wringer, pour on the boiling water, fold the wringer over the flannel, and taking a stick in each hand twist them in opposite directions until every drop of water that can be squeezed out is wrung from the flannel. The fomentation should be carried in the wringer to the bedside and there unfolded. It should be as hot as it can be borne, and wrung out as dry as possible.

In a private house where the conveniences for wringing are not at hand, the hot flannel can be wrung out quite well by being placed in a towel without the sticks at the ends; or, the flannel may be wrung out of water of a comfortable temperature to the hands, and then a very hot iron passed over it.

Fomentations are very valuable agents for the relief of pain. In violent pain they should be changed as often as every ten or fifteen minutes. If the pain is less severe, once in one, two, or three hours, will be often enough. But in no case should they be allowed to become cold. Fomentations are often useful where the patient has difficulty in passing water.

Spongio-piline is a good material for fomentation.

A double layer of lint, wrung in a towel after being steeped in boiling water, and covered with light india-rubber cloth, forms the best fomentation for long continued application.

### POULTICES.

*Poultices.*—Poultices are employed in the treatment of abscesses, suppurating wounds, inflammation, and pain. In making them the nurse should aim to have them hot, smooth, and light.

*Linseed-meal poultice.*—First scald out the basin in which the poultice is to be made. Then pour in boiling water according to the size of the poultice required. For a linseed-meal poultice, add gradually sufficient linseed-meal to form a thick paste, stirring constantly one way until it is of the proper consistence and smoothness. It may be spread on linen, or muslin.

*Charcoal poultice.*—For a charcoal poultice take two ounces of bread crumbs, and soak for ten minutes in ten ounces of boiling water; then mix, and add gradually one-half an ounce of powdered wood-charcoal, and one and a half ounces of linseed-meal. The whole should be well stirred together, and then spread and applied in the ordinary manner.

*Chlorinated soda poultice.*—A chlorinated soda poultice is made like a linseed-meal poultice, but consists of two parts of linseed-meal to one of chlorinated soda mixed with boiling water.

*Yeast poultice.*—A yeast poultice is made by mixing a pound of flour or linseed-meal, or oat-meal, with half a pint of yeast. The mixture is to be heated and carefully stirred.

All poultices are made with boiling water, except

yeast poultices. With them the temperature should not be over 100°.

*Mustard poultice.*—For a mustard poultice, or plaster, a sufficient quantity of powered mustard should be taken to make a thin paste the required size. This should be mixed with boiling water, with a small quantity of vinegar added, if a very strong poultice is required, and spread on brown paper, or linen, with a piece of thin muslin over it.

A mustard poultice should generally be kept on from ten to twenty minutes, but some skins will bear it much longer than others. If the skin is very irritable afterwards, a little flour should be sprinkled over it. This will remove the burning sensation.

*Mustard and linseed poultice.*—Mustard poultices are often mixed with linseed meal, when a milder form is required than of mustard alone. After the use of any kind of mustard poultice, the skin should be carefully wiped with something very soft, so that no mustard be left behind.

*Caution.*—It is necessary to remember when using any kind of poultice for children that their skin is more tender and sensitive than that of older persons. The same caution applies to the use of heat when the patient is paralyzed, as sloughing may follow after a poultice which has been too hot. Care should be taken in poulticing never to cover the umbilicus or nipples. In poultices a hole should be cut when strapping or bandaging, if it is necessary to cover them, a double fold of lint should be placed over them, before crossing with the bandage or plaster.

*Preparing patient.*—When a poultice is to be applied, the nurse should get her patient ready first. If he has a wound it should be thoroughly washed, and lightly covered. Then the poultice should be made quickly, and applied as warm as the patient can bear it. If the poultice is first made, and kept warm at the fire while the patient is prepared, the water evaporates, and, instead of a poultice, a hard, dry cake is formed.

### INHALATION.

The method of applying heat and moisture in affections of the throat and chest is termed inhalation. In hospitals an apparatus called an inhaler is generally used. Where this cannot be obtained a cone can be made of paper, and this can be placed over a pitcher containing boiling hot water, medicated as desired. The patient should place the mouth-piece of the inhaler, or the small end of the paper cone in, or against the mouth, and breath quietly.

### SPRAY DISPERSER.

*Spray.*—The spray disperser is an apparatus contrived for the formation of spray, and for its inhalation. The usual form of it is that of two india-rubber balls, by which air is forced so rapidly through a tube as to cause a vacuum in a lower tube below it, and the rapid rise of liquid from the bottle in which the tube is fixed.

This instrument supplies the place of gargles, and is very useful in the case of sore throat. Iced water and medicated substances are thus used.

### COLD.

*Cold.*—Cold may be used to arrest bleeding, or subdue inflammation.

The principal intention of many lotions is to abstract heat by means of the evaporation which they produce. The inflamed part, therefore, should be covered with a single layer of thin linen, or muslin—the thinner the better—and kept constantly cool by dropping cold water, or an evaporating lotion, on it.

*Siphons.*—The best way of keeping it wet is by means of a piece of worsted passing to it from a vessel raised somewhat above the part ; or a small siphon may be fitted to the vessel, by which the amount of fluid can be accurately controlled.

*Arrangement of bed.*—The bed near the part must be arranged with rubber-cloth, raised on a small pad towards the center, with a broad piece hanging over the mattress at the side, to carry off superfluous water into a vessel of some sort put to receive it.

*Ice.*—Ice may be broken up into pieces, and put into a bladder, or an india-rubber ice bag. The bladder should not be more than half full, and it should be securely tied around the neck.

The best way of applying ice to the head is to place a smooth piece of ice, two or three inches long, and about one and a half broad, in a cup of soft sponge, and pass it round and round over the head. The sponge absorbs the water, and the pain of the cold is avoided.

### LEECHES.

*Leeches.*—Leeches are applied for the purpose of removing a small quantity of blood from any locality in which it is inconvenient to use any other means of blood-letting, but they should never be applied immediately over a large vein for fear of inflammation or troublesome bleeding.

*How to make them take hold.*—When leeches are to be applied to a part it should first be well washed. If they refuse to take hold moisten the surface with a little cream, milk, or fresh blood. Sometimes when they persist in refusing to bite, if they are put into a plate with some beer, and then held firmly by the tail they will fix themselves almost immediately.

*To make them relax hold.*—When leeches have taken their fill they usually drop off; but sometimes they will stick on for a long time. In such a case the application of a little salt will cause them readily to relax their hold.

*Quantity of blood.*—The quantity of blood obtained by one leech is estimated at a little more than a teaspoonful. It is often desired to increase this, and it may be done by means of a fomentation or poultice placed over the bites. It is then necessary to watch carefully that the bleeding does not become excessive, as some persons bleed much more easily than others.

*To stop bleeding.*—The bleeding from a leech-bite, if excessive, may generally be stopped by the pressure of the finger; but if this be unsuccessful it is better to re-

port to the physician at once. Should there be any delay in his arrival, a little tincture of iron, or a point of caustic may arrest the bleeding. If the patient should become faint while the fomentation is still on, remove it at once, apply a little dry lint to each bite to arrest the bleeding, and send for the doctor. A small quantity of stimulant may be given without delay.

Leeches that have been once applied are seldom of any further use; but if it should be considered desirable to try, the leeches should be placed in a plate with a little salt and water, and when they have relieved themselves of the greater part of the blood which they have swallowed, they should be placed in a jar of clean water by themselves.

*Leeches to the womb.*—It is sometimes necessary to apply leeches to the lips of the womb. The patient must lie on the back with the thighs flexed and separated, and the speculum be introduced. Leech-glasses will be required to apply the leeches, or if these be not at hand, small sized test-tubes will answer.

### CUPPING.

*Cupping. Two kinds.*—Cupping is of two kinds, dry and wet cupping. The following articles are used in both operations, with the addition of an instrument for scarifying, in the case of wet cupping. Four or five small glasses specially made for this purpose, or in the absence of these, common tumblers may be used, some blotting paper or cotton-wool, a little alcohol in a saucer, and a lighted candle or spirit lamp.

The first portion of the operation is the same in both cases.

*Applying the cups.*—The glasses should be previously warmed, and some pieces of blotting paper, about two inches square, be set to soak in the alcohol. Then taking a glass in the right hand, the nurse should light a piece of the blotting paper, saturated with alcohol, and throw it into the glass, and after letting it burn for two or three seconds, should invert the glass suddenly over the selected spot, and so on with each in succession. A bladder will be seen to rise almost immediately in the interior of each glass, and now, if wet cupping be desired, the glass must be removed, the scarificator applied to the part, and the glass re-applied as before.

*Removing.*—The glasses may be easily removed by inserting the thumb-nail between the rim of the glass and the skin.

*Time.*—The glasses may be left on for periods varying from five minutes to half an hour.

### BLISTERS.

*Blisters.*—Blisters are of different shape, according to the part to which they are applied; the time required for their action varies, but is usually from six to eight hours. By gently raising the edge on one side, the question as to the appearance of the blister may be easily settled.

*Dressing.*—When the skin is properly raised, the blister may be dressed in one of two ways, according as whether it is desired to keep open, or to heal the blistered surface. In the latter case, after the plaster has been

carefully removed, the cuticle should be snipped at the most depending part, and the fluid evacuated into a small cup held to receive it. Place a little cotton wool around to prevent the fluid running over the skin. It should then be dressed with a piece of lint, spread with simple ointment or cosmoline.

*Open blister.*—If, on the contrary, it is desired to keep the blister open, the cuticle should be removed by cutting all round the edge with a pair of scissors, after which it will be dressed with some irritating ointment as ordered.

### LOTIONS.

*Lotions.*—Lotions are usually applied on lint or rag which has been previously soaked in the lotion required. If it is desired to produce a cooling effect by the evaporation of the lotion, only one layer of very thin material should be used.

*Evaporating lotion.* A simple evaporating lotion is one part of alcohol to eight of water. Bay rum or cologne may be substituted for the alcohol. The following is a very good formula: Muriate of ammonia, 12 grs.; alcohol, 36 minims; water, 1 oz.

*Drops for the eyes.*—When a nurse is ordered to drop a lotion into the eye, she should always use a new camel's hair brush for the purpose—unless otherwise directed—as with that it is almost impossible to injure the eye if the patient should start suddenly, which he is very likely to do should the lotion cause him some pain.

### LINIMENTS.

*Liniment.*—When any remedy in a liquid form is ap-

plied to a part by rubbing, it is called a liniment, and may be either soothing, stimulating, or counter-irritant.

*Caution.*—Great care must be taken with liniments and lotions that they be not administered internally [see page 36].

## CHAPTER VI.

### DRESSING OF WOUNDS.

#### APPARATUS GENERALLY EMPLOYED IN DRESSING.

*STICKING PLASTER.*—Sticking plaster, called also adhesive plaster, or resin plaster, is used to bring the edges of wounds together, and to retain applications in position. It should be cut in strips varying in breadth from a quarter of a inch to an inch and a half, and in the direction of the length of the web, and not across the breadth, as it will stretch and become useless if so cut. The best mode of heating it is by applying the linen side to a tin vessel containing hot water. The flame of an alcohol lamp or candle may also be used for this purpose.

The edges of the wound should be held together with the finger and thumb of the left hand, while one end of the strip, held in the right hand, should be laid on the skin at a distance, and brought across the wound tightly.

Before the application of sticking plaster to any part of the body it should be well dried, and all hairs be shaved off.

*Isinglass plaster.*—Isinglass plaster is also employed for bringing together the edges of wounds. It is rendered sticky by moistening the coated side with a damp

sponge, care being taken not to rub the sponge more than once over it.

*Bandages.*—Bandages are used to retain dressings in position.

*Lint.*—Lint is a soft linen woven material, with a nap on one side. It should always be cut with scissors and not torn, as it will pull into shreds if the latter be attempted.

*Charpie.*—Charpie is composed of ravelings or shreds torn or scraped from linen.

*Oakum.*—Oakum is old rope which has been shredded and carded. It is of a bright brown color, with a tarry odor. A little of the oakum is teased and drawn into a suitable shape for covering the wound. It absorbs the discharge from wounds, and, being impregnated with tar, acts as disinfectant to destroy any bad odor arising from them.

*Tow.*—Tow is the fibre of flax or hemp teased and loosely carded into sheets and done up in rolls. It is employed to absorb discharges from wounds, as a substitute for sponges in washing wounds, and for stuffing pads for splints.

*Disinfectants.*—Disinfectants of various kinds are used in washing wounds. One commonly used is a solution of carbolic acid, one part to one hundred parts of water.

*The dressing-tray.*—The dressing-tray should be provided with the following materials and appliances necessary in dressing wounds : a pair of dressing forceps, for removing any particles of dressing or other matter which may adhere to the wound, and also for introducing small portions of lint or other dressing into a wound ; a pair

of strong, sharp scissors, with which to cut lint, sticking-plaster, and other dressing material; a pair of sharp-pointed scissors, useful in dressing blisters; a razor, for shaving hairy surfaces near a wound; a small silver probe, to convey small pieces of dressing into deep openings; a scalpel; a spatula; a caustic-holder; pins; needles; white thread; silk; lint; cotton-wool; tow; bandages; sticking plaster; soft rags.

*Other things needed.*—There are other things which the nurse must get ready before proceeding to uncover the wound. The bed must be protected by a rubber cloth. The tin for heating the sticking-plaster must be filled with hot water. Two basins are necessary—one to be placed below the part to be washed, in such a position as to catch the water as it flows off the wound, while the other should contain the fresh water which is to trickle over the wound. Then there should be a bowl for the soiled dressings, warm water, a disinfectant lotion, and any special ointment, or dressing, as ordered.

*Sponges.*—Sponges are objectionable for dressing wounds, as they are liable to be the means of conveying poisonous matter from one wound or sore to another. Tow, or cotton-wool soaked in water are much better, as they can be destroyed after use, and thus insure a clean thing each time, and prevent any chance of the same thing being used for more than one patient.

*When proceed to uncover wounds.*—Wounds should never be uncovered for the purpose of being dressed until everything that is likely to be required during the process is at hand; the only exception to this rule being those wounds which require poulticing, when the old

dressing should be removed, the discharges cleaned away, and the wound lightly covered with a piece of clean linen until the poultice is ready. In the case of a patient who is burnt over a large surface of the body, only a small part should be uncovered at a time.

*Precaution.*—If the surgical nurse has any crack or cut on her hands it should be covered with adhesive plaster before commencing the dressing. If the skin is not quite smooth around the nails, if there is any scratch or hang-nail, the nurse would do well to put simple cerate or soap all around the nails.

*Necessary care.*—After attending to one patient, the nurse must put the soiled dressings in the proper receptacle, wash and disinfect all vessels and utensils, carefully wash her hands in soap and water, and in a disinfectant solution, as a five per cent. solution of carbolic acid, before going to another patient. Pyæmia and erysipelas should be the dread of a surgical nurse, and too great care cannot be taken to prevent any possible contamination, in going from one patient to another.

In case of an infected patient he should if possible be removed from the ward; but if this cannot be done he should be isolated as much as possible, and on no consideration should any of his bedding or clothing be used for any other patient until it has undergone the most thorough washing and disinfecting.

*Removing dressing.*—The greatest care must be taken in removing dressings. If adherent to a wound, they should never be pulled off sharply, but should be moistened by bathing with warm water, or by the application of a bread poultice. The edges of the dressing should be wet,

and then always raised all the way round, so that the last part that comes off should be that in the centre of the wound. In any case draw towards the wound, and when one end is loosened so far, the other end must be loosened in the same way, so that the wound may not be opened or any adhesions destroyed; and in washing round the wound, wash towards the sore and not away from it.

*Cleansing.*—Discharges should be cleansed away from the edges of a wound, and from the surrounding parts, but the surface of the wound itself should be left undisturbed.

If the case be one of operation, the nurse should know how many ligatures there are, so that she may know when any come away. She should never attempt to remove a ligature unless it is lying loose in the wound.

To cleanse the wound itself, it is best to use a syringe by which a continuous flow can be kept up.

To wash a recently-inflicted wound cold water should be employed, as it has a tendency to stop the bleeding, while warm water favors it; but in the case of old wounds or ulcers, warm water at a temperature of about 98°, is better suited, being more grateful to the patient, and more effective in softening hardened dressings, and cleansing a foul surface. Some disinfecting fluid should be added to the water when the discharge is offensive, and the washing of the wound continued until the offensive smell is destroyed.

By means of the steady flow of water from the syringe the discharges are easily got rid of, and no part of the

instrument need come in actual contact with the patient. The fluid which has traversed the affected part should be received in a basin previously placed in a convenient position.

*Caution.*—In using the syringe the nurse must be careful not to let the fluid fly from the wound into her eyes, as the consequences would be most serious. She must also be careful not to touch the eyes with the fingers while engaged in dressing a wound.

If the substance of which the plaster is composed adheres to the skin and cannot be washed, a little oil will effect its removal.

### KINDS OF DRESSINGS.

*Dry dressing.*—Dry dressing is generally used as the first application to wounds. It consists of plaster and dry lint. The edges of the wound are brought together as nearly as possible by strips of plaster, and over these are placed a couple of folds of dry lint bound down by a few more strips of plaster. A bandage may be applied over the whole if in a position to admit of it.

Dry dressing may be allowed to remain on two or three days before it is removed. In the removal of this kind of dressing especial care must be taken to saturate the lint thoroughly with warm water while it is gently pulled away, so as to avoid tearing open the wound, and breaking down the union which may have taken place.

*Antiseptic dressing.*—This mode of dressing has been lately introduced by Professor Lister, and for its use special carbolic acid dressings, solutions, and the spray apparatus are required.

*Water dressing.*—Water dressing is the application to a sore or wound of a piece of lint, soft linen, or charpie, saturated with water, and covered over with oiled silk, or thin india-rubber cloth, to prevent evaporation or the escape of moisture into the surrounding bed-clothes.

The lint should be double, and of a size according to the surface to be covered. The waterproof material should be cut a little larger than the lint. Care should be taken that none of the lint projects from under the edge of the covering, for if such be the case the water will escape into the bandage and clothes, leaving the lint dry and sticking to the wound. Over the whole may be placed a common roller bandage.

Water dressing should be renewed twice in every twenty-four hours, or more often if there be much discharge.

*Evaporating dressing.*—Evaporating dressing consists of a single fold of lint placed over the injured part, and freely exposed to the atmosphere to favor evaporation. The object in view is the production of cold by evaporation, and consequently a low temperature of the injured part. The lint should be of considerable size, and kept constantly wet, and the limb to which it is applied should be placed on a water-proof sheet, under a cradle, and completely uncovered by bed-clothes.

*Irrigation.*—Irrigation is a stream of water conducted over an injured part to prevent inflammation [see page 51].

*Ointment dressing.*—Ointments of various kinds are frequently used as dressings for ulcers and wounds. The ointment is spread with a spatula in a thin layer on one

side of lint. The lint thus prepared is applied to the part, and maintained in position by a few cross strips of plaster, and if necessary a roller bandage. Once a day will be sufficient to dress an ulcer, except when the discharge is profuse, when it may be necessary to renew the application two or three times a day. Simple ointment is employed to prevent applications sticking to the surface of a sore.

### BANDAGES.

*Texture.*—Bandages are made of unbleached muslin or flannel, torn or woven into strips which vary in breadth and length according to the part for which they are required.

*Breadth and length.*—For the fingers, the breadth is about three-quarters of an inch; for the head and upper extremity, two and a half inches; and for the body and lower extremity, three inches. For the fingers, the length is from a yard to a yard and a half; for the head and upper extremity, three to six yards; for the lower extremity and body, six to eight yards.

*Rolling a bandage.*—Before applying a bandage it is necessary that it should be neatly and firmly rolled. It is rolled either with a single head or a double head.

*To roll a bandage with a single head.*—One end of the bandage, being folded four or five times upon itself, is made into a small roll, which is seized by the fingers of both hands, and both thumbs placed on the top of it; while the unrolled bandage, coming from the upper side of the roll over the fingers, is spread out on the floor in front of the person about to roll it. The thumbs now

by an alternate movement, make the roll revolve inward on its own axis, while the fingers hold it fixed in position between the two hands. This movement is continued until the whole of the bandage is wound tightly and evenly round the original roll. The end should then be fastened by a stitch, pin, or thread, to prevent it unrolling.

*To roll a bandage with a double head.*—The bandage should first be marked at its center, rolled from one end to this mark, and fastened, and then rolled in like manner from the other end.

*Plaster of Paris bandage or splint.*—A plaster of Paris bandage is usually made as follows: Dust dry powdered gypsum into the meshes of a coarse muslin bandage, and roll it up ready for use.

Envelope the limb in a flannel roller or layer of cotton-wool, soak the muslin roller, previously prepared, in water, and apply it over the flannel as an ordinary roller; then rub it over with a thick paste of gypsum and water, making the outside perfectly smooth. Keep the limb in a proper position while the plaster sets, which it will in a few minutes.

### SPLINT PADDING.

Splints made of wood, tin, or japanned iron, require to be lined with some description of soft padding before application.

The head nurse of a ward should always keep one complete set of pads to the most commonly-used splints in readiness for any emergency.

Very good pads are made of three or more thicknesses of old blankets, or woolen rugs, covered on both sides with old linen sheeting, and quilted through in a large diamond pattern. These pads will wash. Another pad is made by teasing tow, covering it with soft muslin, and quilting it in the same way.

## CHAPTER VII.

### OPERATIONS.

#### PREPARATION OF ROOM.

*OPERATING-TABLE.*—The operating-table must be furnished with a mattress and pillows, over which should be spread the sacking stretcher, covered by a clean sheet. A piece of waterproof sheeting should be ready to put round or under the patient, and a blanket to cover him. A wooden tray with sawdust should be under the table ready for use.

*Articles necessary.*—The nurse should see that there are plenty of towels, wash-hand-basins and soap. Hot and cold water should be at hand, a solution of carbolic acid, carbolized oil, small bowls to receive discharges, sponges, flannel and muslin bandages of various sizes, cotton-wool, tow, lint, charpie, linen compresses, pins, needles, thread. It is well to have a little brandy on hand in case of patient being faint.

*Sponges.*—Great care should be taken to see that the sponges are perfectly clean. They should be well washed in a solution of carbolic acid, then passed through several additions of clean cold water, and then left to stand in cold water until they are required.

If new sponges are to be used they must be perfectly free from the sand and little pieces of shell which are always to be found in them. They should be put in cold water to soak for two or three days previous to the time when they will be used, when they must be frequently squeezed out and the water changed. The shell will require to be picked out by the fingers, and sometimes even to be cut out with the scissors. Among the sponges there must always be a number of pieces from one or two inches square and upwards.

During the operation the nurse is usually required to clean and squeeze the sponges used. They should be washed in cold water and squeezed as dry as possible; the best way being to place them in a cloth, and turn the two ends rapidly in opposite directions.

### PREPARATION OF PATIENT.

*Patient before the operation.*—If possible, the patient should have a bath on the morning of the operation. If ether is to be administered the patient should have a pint of beef tea *four hours before* the operation, and should have *nothing else*, except perhaps a little brandy, before the operation. In all operations on the parts about the bladder and rectum, an enema should be administered on the morning of the operation, and in many cases the bladder emptied by the catheter.

The patient's clothes should be properly arranged beforehand. All bands should invariably be loosened. The part to be operated on should be covered only by a loose article of dress, which can be thrown off in a moment.

All dressings should be removed, and any wounds washed clean and lightly covered with a piece of wet lint or a turn or two of a roller.

The bed which is to receive the patient should be made ready before the operation.

*After the operation.*—After the operation the patient should be laid on his back on a clean bed, with his head somewhat raised so that he can breathe freely; care must be taken not to allow the chin to drop on the chest. He should be allowed plenty of fresh air, but at the same time be kept very warm, particularly about the feet, which should be wrapped in hot flannel or have hot bottles laid near them. If vomiting occur, he may be turned on his side and the head held over a basin, or if he cannot be turned, the head and body may generally be raised. Sucking small pieces of ice will generally check sickness or vomiting.

The nurse must be on the alert to see if any bleeding occur. Blood is most liable to escape at the lower part of a wound. Place a clean towel in such a way that the blood, if there is any, may soak into it, so that no considerable portion can be lost without noticing it.

The patient requires to be carefully watched, and if any unusual depression be observed, it must be brought at once to the notice of the surgeon in charge.

After most operations the patient should be prevented from frequently moving his position in bed, and in many cases all movement is forbidden. Nourishment must be given in accordance with the special instructions given on that point.

IMPORTANT POINTS IN SPECIAL OPERATIONS.

*Amputation.*—In amputations the plaster used for keeping flaps together should vary from one-half inch in the forearm to one and a half inches in the thigh; when changing, one piece only should be removed at a time, and be immediately replaced by a fresh one. The plaster should never be applied so as to press upon the end of the bone. The limb should be slightly raised, and a cradle placed over it to take off the weight of the bed clothes.

The patient should never be left alone after an amputation until all the ligatures have come away, as bleeding might come on at any time, in which case the nurse must at once make pressure at the bleeding point, and send for the surgeon. Ligatures of the small arteries usually separate in a week or ten days, but those securing the larger ones, as the femoral, do not come away until after two or three weeks.

*Excision and resection of joints.*—The surgeon will usually select a special splint for any particular case, and the nurse will be required to pad it. It is well to remember that a small piece of oiled-silk should be placed on the splint under where the wound comes, to prevent the splint from being soiled by the discharges. This can be so laid on that it can be withdrawn from under the wound without raising the limb. The clean lint and the oiled silk can be tacked on to the dirty piece, and be gently drawn through without disturbing the limb or giving pain.

The extremity of the limb from which a joint has been removed should be kept wrapped up in cotton-wool, as otherwise the patient is very likely to feel the cold for the first few days.

*Hernia.*—A hernia is a protrusion of a part of the bowels through an unnatural opening. In many cases the bowel can be returned and kept in position by wearing a well-fitting truss; but where an operation has been necessary, the patient should be kept strictly in the recumbent position, and if he vomit, or have a violent fit of coughing, it is a useful precaution for the nurse to support the wound with her hand during this time of extra pressure. No food whatever should be given except that ordered by the surgeon, and that is usually ice, iced milk, beef tea, and a little brandy or wine for a few days.

*Lithotomy.*—Lithotomy is the operation for removing stone from the bladder by cutting. After the operation the patient should be so placed in the bed that the discharges should either drain away at once, or be easily removed before they accumulate. The nurse should carefully notice whether any fragment of stone come away, and how much urine, if any, passes through the natural opening.

*Lithotrity.*—Lithotrity is the operation of crushing a stone in the bladder. The patient should be kept in bed, and all the water passed should be collected and filtered, so that any fragment of stone that may escape may be reserved for the observation of the surgeon.

*Ovariotomy.*—The patient should be kept quiet in bed on a simple, nourishing diet for three or four days previous to the operation, and on that day should have no

food except a pint of beef tea and a little brandy three or four hours before the operation; an enema should be administered, and the bladder emptied by the catheter beforehand.

The room in which the operation is to be performed must be previously well warmed, and a constant temperature of about 70° be maintained; the air may also be kept moist by keeping a kettle of water boiling on the fire. A supply of fresh air should be secured without exposing the patient to a draught. The following is a list of things the nurse should provide: a small bath, to hold the fluid; one or two buckets; three or four bleeding bowls; two dozen sponges, quite new, and perfectly clean; one dozen towels; several basins with clean, cold water, to wash the sponges; boiling water, with four *new* yard-squares of flannel, previously passed through water to make them soft, ready for fomentations, if required; *new* wringers; olive oil; carbolic lotion; brandy; sticking plaster and lint; a rib roller of cotton, and one of flannel; a many-tailed bandage, of ten or twelve inches wide, and one yard and a quarter long.

The dress of the patient should be such as to necessitate the least possible movement after the operation. In any changes of bed or body linen, care must be taken to have everything well aired and warmed beforehand. Nothing cold must be allowed to touch the patient. The bed-pan must be warmed with hot water, the edge oiled so as to slip readily into position. The nurse will receive full instructions from the operator in regard to the care of the patient after the operation, as to food, temperature of room, etc.

*Cleft palate.*—After this operation the patient must neither be allowed to speak nor take solid food until he has permission from the surgeon. The nurse must be watchful, and make sure that no blood runs down the throat unnoticed by her.

*Tracheotomy.*—The nursing of a patient after tracheotomy requires great skill and attention. The tube must be kept free from clogging by means of a feather, and the inner one has to be removed from time to time for thorough cleansing, when care has to be taken to prevent pulling out both tubes together.

The head and chest of the patient must be well supported by pillows, care being taken that the head be not pressed forward upon the chest, and that the pillows at the back shall be so placed as to give the lungs free play.

When the cough comes on the nurse must be instantly on hand to give all the help she can to prevent the patient from being suffocated. Children, especially, are apt to throw themselves about, and even to clutch at the tube with their fingers, by which means they might fall into a position that would be fatal, or pull the tube out of the throat. When attending to the patient during the cough, the nurse must be careful that she does not put her own face near enough to catch by accident any discharge from the tube, which sometimes is forced out with some violence, as the result would be dangerous to herself, particularly where the operation had been performed on a patient suffering from diphtheria.

The room is generally kept at a temperature of 70°, and the air moist by the aid of steam from boiling water.

If enemata be ordered, the nurse must remember that

the patient cannot lie down with safety. She must make such an arrangement of pillows and supports as will enable her to place her patient in such a position as would let the syringe act.

## CHAPTER VIII.

### SOME POINTS IN REGARD TO SPECIAL MEDICAL CASES.

#### FEVERS.

*BED.*—The bed for a fever patient should be provided with a rubber sheet and draw-sheet. It should not be near that of another patient seriously ill.

*Ventilation.*—Ventilation, always important, is doubly so here, and in order that the air the patient breathes be pure, there must be a constant supply of fresh air from open windows and ventilators. The patient need not be chilled in doing this, but may be kept warm with bed clothes and hot bottles.

*Guard against bed-sores.*—In fever a patient lies on his back without moving much, and often the evacuations are passed almost without his cognizance; bed-sores must be guarded against, and air or water cushions used as necessary to take off pressure and prevent inflammation. Where the confinement to bed is likely to be prolonged, a water bed, if procurable, should be used.

*Cleanliness.*—The clothing of the bed and patient should be changed daily, and oftener if necessary.

*Sponging.*—When frequent sponging of the body with

cold or tepid water, with or without vinegar or alcohol, is ordered, only a small portion should be sponged at a time. The sponge should be passed in only one direction, and that downward, and the skin must be dried with a warm, soft towel, all rubbing being avoided.

*Cold pack.*—To give a cold pack, take all the clothes off the bed; lay over the mattress two comfortables and a blanket, or three blankets; wring a sheet out in cold water and place over the whole. Then put the patient on the bed, the clothing having previously been removed. Fold one side of the sheet over the patient under the arms, then the other side over the arms; tuck in well around the neck. Then wrap blankets and comfortables over in the same way. Twenty minutes is the average time for keeping a patient in the pack. The patient should feel warm in about five minutes, and in ten minutes will usually be comfortable enough to go to sleep, if not too sick.

Use a small slice of lemon or a little salt to cleanse the teeth and gums, rubbing it gently over teeth, tongue, and lips. Then with a little pure cold water and a charpie brush rapidly wash over the same. The mouth may be washed with carbolic acid spray.

The feet and legs of the patient must be examined from time to time to see that they do not become cold. Where any tendency to chill is discovered, hot bottles, or warm flannels, with some warm drink, should be made use of until the temperature is restored.

The patient must not be annoyed by flies. By tying strings across the bed, gauze or netting may be supported away from the patient's face.

Hours for nourishment and stimulants will be exactly ordered by the physician. The diet is generally liquid, consisting of milk, broths, thin gruel and beef tea. Cooling drinks are given in small quantities at frequent intervals. Small bits of ice are very refreshing. The nurse must ascertain from the physician if the patient should be wakened to take either nourishment or medicine.

Every contrivance must be employed to save the patient's strength during the first stage of convalescence. Pillows of different forms and sizes should be so placed as to prop the body into the most comfortable position for the time. This is the stage at which the nurse must exercise her ingenuity to interest and amuse the patient.

### ERUPTIVE FEVERS.

Many of the directions already given for fevers should also be followed in eruptive fevers.

For the early stages, when the skin is very hot, a warm bath or tepid sponging will prove refreshing, taking care that the patient does not become chilled. Cleanse the eyes and nostrils with water and a piece of lint as often as required. In small-pox when the pustules have burst this is all that is practicable. In this disease early application of light poultices to the face have been found a great comfort and a protection against pitting. To allay itching, oil the pustules on the face, neck and body with olive oil, cold cream, etc. This oiling of the body is very useful also in scarlet fever, and helps to lower the temperature. Cocoa butter is frequently used for this purpose. In small-pox the nurse must examine the body

carefully, and if she finds any signs of abscess forming should report it to the physician.

### BED-SORES—PREVENTION AND TREATMENT.

From the first beginning of a confinement to the bed which is likely to be a long one, the nurse must bear in mind the liability of bed-sores, and the necessity of using all possible care for preventing them.

The patient must be kept clean and dry. This is a very difficult thing to do in some cases, and requires the most constant care and attention on the part of the nurse. In cases of paralysis of the lower part of the body, where the patient is unable to turn in bed, and the evacuations are passed involuntarily, bed-sores can be avoided only by the most unceasing attention to cleanliness. The back should be washed with warm water and soap, and well dried with a soft towel. Afterwards a little oxide of zinc powder may be used to insure perfect dryness. If the back be well rubbed with some spirits, or alcohol and water, it tends to harden the skin, and renders it less likely to become sore. The nurse should examine the back every day, and if she finds that her patient is threatened with a sore, let her take a piece of amadon plaster, an inch larger all round than the size of the tender skin, and from the centre of this cut another just large enough to prevent the plaster touching the tenderest part of the threatened sore. If this circular piece of plaster be then applied, the thickness of it will remove the pressure on the part.

Circular water and air cushions are a great aid in pre-

venting bed-sores, and give great relief where one actually exists. Circular pillows with a hole in the centre may also be made from old, soft linen, and stuffed with tow.

Another very important thing to be remembered in the prevention of bed-sores, is the necessity of keeping the under sheet smooth and free from wrinkles or crumbs.

## CHAPTER IX.

### EMERGENCIES.

THE following articles are often required in the treatment of emergencies, and the head nurse of a surgical ward should have them where they may be obtained at a moment's notice :

*Articles often required.*—Tins for applying hot water to the feet or abdomen, mustard and linseed meal for poultices, cotton-wool, tow, lint, bandages, pads for the most commonly-used splints, sponges, scissors, pins, sticking-plaster, olive oil, sand-bags, fillets, extra pillows, chaff pillows, brandy, a tourniquette, an artery forceps, and some ligatures.

*Preparation of bed.*—There should be certain beds reserved for accidents. These should always be kept ready for use. Under the mattress should be placed fracture boards, to prevent the bed from sinking in the centre. Where not required these can afterwards be removed. The bed should be provided with a large rubber sheet for the protection of the mattress, and a draw-sheet should be placed across the middle of the bed. It may be needed there, or be used for the protection of the pillow, as the nature of the accident may require. A change of linen for the patient should be placed on the bed.

### FRACTURES.

*Different kinds of fracture.*—Fractures may be simple, compound, and comminuted.

*Simple.*—When a bone is broken in one place without any external wound.

*Compound.*—When a bone is broken in one place, and there is an external wound leading down to the broken bone.

*Comminuted.*—When a bone is broken in two or more places, as when a splinter of bone is broken off.

*What can be done by the nurse.*—In the following cases, if the nurse has to wait the arrival of the surgeon, she can in the mean time proceed according to these simple directions:

*Skull.*—Put the patient in bed, and keep wet lint applied over the seat of injury.

*Collar-bone.*—Keep the patient in bed, without a pillow, with the arm on the injured side folded across the chest.

*Ribs.*—The patient should remain in bed, should have a spittoon within reach, and the character of the expectoration be noticed.

*Thigh, leg, or arms.*—The limb should be temporarily kept in position by means of sand-bags or pillows secured by fillets.

### HEMORRHAGE.

*Three methods of arresting hemorrhage.*—There are three methods of stopping bleeding, with which the nurse should be familiar:

1. Pressure at the bleeding point. Blood may often be seen to flow from one small point only of a wound; slight pressure with one finger, or the ball of the thumb over the spot will usually stop it, as long as the pressure is kept up, and often altogether, even after the pressure is removed.

2. Pressure on the main artery supplying the wound. To be able to make this pressure on the exact spot requires a knowledge of the distribution of the main arteries of the body. Where this is wanting, the nurse may apply a roller bandage as tightly as possible around the limb above the wound; this pressure must not be kept up very long, as mortification may be produced by it.

3. The application of cold. This plan answers best when the bleeding is from several points scattered over a large surface; it is conveniently applied by letting cold water drip from a sponge on to the bleeding surface, or by the application of ice.

The part from which the blood comes should be raised above the rest of the body, and if the patient become faint he should not be roused immediately, since faintness acts as nature's remedy by lessening the force and activity of the flow of blood.

*Arterial and venous hemorrhage.*—Blood from the arteries is of a bright red color, and bursts out in spurts; while venous blood is purplish-red, and flows in a steady stream.

*Rupture of varicose vein.*—One common source of sudden bleeding is that which proceeds from the rupture of a varicose vein in the leg. The treatment in this case will consist in laying the patient down, raising the limb,

and applying steady pressure by a pad and bandage to the bleeding point.

*Bleeding from the nose.*—Epistaxis, or bleeding from the nose, is seldom serious, and may generally be controlled by the application of cold water. The patient should be kept upright, with his head thrown back and his hands raised above his head, with a sponge or some cotton-wool over his nose to receive the blood, but should on no account be allowed to stand with his head bent down over a basin, which encourages the bleeding.

*Internal hemorrhage.*—In addition to hemorrhage from external wounds, blood may also come from the interior of the body, and a nurse is sometimes required to supply information as to the character of this blood, from which the physician may judge of its origin.

Hæmoptysis, or spitting of blood. Blood from the lungs is generally coughed up, is frothy, mixed with mucus, in small quantity, and of a bright red color.

Hæmatemesis, or vomiting of blood. Blood from the stomach is vomited up, mixed with particles of food, in large quantity, and dark red or even black in color.

Blood from the back of the throat, gums, and mouth generally is of a red color, usually mixed with saliva, and is neither coughed nor vomited up unless previously swallowed.

Foreign substances, as logwood, brick-dust, port-wine, and other things, are often purposely mixed with the saliva by hysterical patients, who not unfrequently also pick their gums, bite their lips, or suck at the socket of a tooth until it bleed, in order to create sympathy.

In the case of female patients, bleeding from the womb

at other than the menstrual periods should always be at once reported to the physician.

The quantity of blood lost by a patient should always be carefully noted.

### INSENSIBLE PATIENTS.

No violent measures should be used to arouse a patient who is insensible. Lay him in bed, loosen any bands, and let him have a free access of air.

Notice whether the breathing is quiet or noisy, regular or irregular, whether there are any convulsive movements of the limbs, whether the urine or feces be passed involuntarily, whether the pupils of both eyes are alike, or larger or smaller than natural, whether the patient will bear to have his eyes touched, and whether he can be aroused at all.

In all cases of apparent insensibility, the nurse should be careful to say nothing about the patient within his hearing. Though he can neither speak nor move, he may yet be perfectly conscious of what is passing round him.

### DELIRIOUS PATIENTS.

Avoid any roughness in dealing with delirious patients, but always be firm, and never let them see that you are afraid of them or inclined to let them have their own way. Do not attempt to argue with them, or to contradict any of their assertions, but at the same time it is well to appear interested in their conversation. See that the lower parts of the windows are carefully fastened

down, and that there are no knives or dangerous weapons within reach of the patient. A nurse should never be left alone with a patient in violent delirium, unless immediate assistance is available at a moment's notice.

### FAINTNESS.

In any case of faintness, the patient should be at once placed in a recumbent position, all tight clothing about the neck and chest be loosened, and a supply of fresh cold water secured. If there be only slight faintness, it may be all that is necessary to place the patient in a cold draught of air. Where there is complete loss of consciousness, water dashed on the face or chest, or applied by means of a wet towel, striking the palms of the hands and rubbing them rapidly, are good means of restoration. A plate may be dipped in hot water and placed over the stomach. Smelling salts, or any preparation of ammonia, should not be used too persistently, as they are liable to injure the lining membrane of the respiratory passages.

### BURNS.

*First treatment of burns.*—If a person has been badly burnt, as by the clothes taking fire, the greatest care must be taken in their removal not to remove also some portion of the skin or flesh to which they will adhere. This may be avoided by making the clothes quite wet. It will be also necessary to cut the clothing more or less in removing it. The first thing to be done in the treatment of burns, whether superficial or deep, whether extending

over a large or small surface, is to exclude atmospheric air. This may be done by keeping the part wrapped up in cloths saturated with sweet oil; or a thick layer of flour may be placed over the burnt surface, and then covered with cotton. Carron oil, which is a mixture of equal parts of linseed oil and lime-water, is one of the best remedies for a burn.

### STINGS AND BITES.

*Stings of bees, wasps, mosquitoes.*—Stings of bees, wasps, etc., may become dangerous, in case of numerous bites, as from a swarm of bees. Apply cooling lotions, or a cold poultice, or rub the parts with olive-oil. Ammonia-water is useful in allaying the irritation from mosquito-bites.

*Bites from a mad dog or snake.*—A wound inflicted by a dog suspected of madness, or by poisonous reptiles, should be washed by holding it under a stream of water for a few seconds, where this can be done without delay, after which the attempt must be made to remove the poison by suction. If water be not close at hand, apply the lips at once and suck out the poison. After this the wound must be deeply burnt with a hot iron, as a red-hot poker, until the surface is charred and dry. Or, if this cannot be done immediately, the bitten part should be cut out, the excision extending some distance into the healthy tissue. The burning is the surest remedy, and it is even considered necessary where the knife has been previously used. A string tied tightly around the limb may help to prevent the absorption of the poison.

There is no case where immediate action is more imperative. The question of life or death is decided in a few minutes. It is therefore necessary that the non-professional person know what to do, for if there be any delay and the poison becomes absorbed, the greatest medical science is at present unable to avert the fatal consequences.

### FOREIGN BODIES.

When anything has lodged in the throat causing choking or suffocation, a smart blow on the back between the shoulders will in many cases send the substance out of the mouth. Should this fail, hold up the body by the feet (in the case of a child), and let another person strike between the shoulders with the open hand. This process should only last for a moment. Look in the throat and see if the substance can be reached; seize hold of it with the thumb and finger, or a pair of blunt-pointed scissors, and pull it out.

If there is only a small substance in the throat, causing a troublesome tickling cough, give bread, followed by a drink of water, and if this is not sufficient, give a little mustard and warm water as an emetic, and after vomiting there will probably be no further trouble.

*In the nose.*—When any small article, as peas, beans, pebbles, etc., have been pushed into the nose, they may often be removed by snuff, or any other substance which will produce sneezing, being introduced into the opposite nostril, or by the use of a pair of forceps or blunt-pointed scissors, care being taken not to push the substance back

into the throat. Peas and beans are the more dangerous, as they increase in size by the absorption of moisture.

*In the ear.*—Insects in the ear are removed by plugging the external opening with a piece of cotton saturated with a solution of salt or vinegar, so as to prevent the admission of air. Then let the patient lie on the affected side, and press the hand firmly on the ear. After a few minutes the insect may be found imbedded in the cotton. Or, lay the patient on the opposite side, and fill the ear with oil.

A small stream of water from a syringe will often remove small bodies or sand. If any substance can be readily seized with the forceps they may be used for this purpose; but very little force must be used or the substance will be pushed still further in, rupturing the drum of the ear, and permanent deafness be the result.

*In the eye.*—For the removal of dirt, sand, etc., from the eye, it will often suffice to lift the upper lid away from the eye-ball by taking hold of the lashes, drawing it down over the lower lid, and allowing it to slide slowly back. Then wipe the edges with a handkerchief to remove the foreign body from the lashes. Or, take something hard, like a knitting-needle or pencil, and press it across the outside of the upper lid, then take hold of the lashes and make the lid turn over the pencil, and the substance will generally be seen sticking to the delicate membrane which lines the lids, when it can be gently washed or rubbed off.

### SUNSTROKE.

This is a sudden prostration due to long exposure to

great heat. The same effect is produced by the heat of the sun, and by prolonged confinement in the heated atmosphere of a building. Persons of intemperate habits, or those who are debilitated, or much fatigued or exhausted, are most liable to the attack. It begins with pain in the head or dizziness, the limbs become weak and refuse to give support, and loss of consciousness quickly follows. The head is very hot, the face red and swollen, the breathing labored and snoring, and the extremities cold.

The patient should be placed in a cool room, or in a cool, shady place, the head should be elevated, the clothing loosened, cloths wet in ice-water applied to the head, and mustard or turpentine to the soles of the feet and calves of the leg. As soon as the patient can swallow, a little stimulant may be given, and further treatment left till the arrival of the physician.

### CONVULSIONS.

The treatment of convulsions in children is given elsewhere.

In other cases, it is often difficult to distinguish between a convulsive fit which is the result of epilepsy and that caused by hysteria.

The following are the main points on which it is desirable that the nurse be able to give exact information:

1. What is the condition of the patient before the fit?
2. Does the patient cry out? — E. Once. H. Repeatedly

| | |
|---|---|
| 3. Does the patient injure herself by biting the tongue, falling heavily, or striking the furniture? | E. Frequently.<br>H. Rarely. |
| 4. How long does the fit last? | |
| 5. Will the patient bear having the eyes touched? | E. Always.<br>H. Rarely. |
| 6. Does the patient have involuntary evacuations from the bowels or bladder during the fit? * | E. Frequently.<br>H. Seldom. |
| 7. What is the state of the patient after the fit? | E. Stupid, dull headache.<br>H. Drowsy. |
| 8. Are there any worms in the motions? | E. Sometimes.<br>H. Rarely. |

The treatment to be adopted is to lay the patient on the bed or floor, loosen the clothing about the neck and chest; if the patient be in the habit of biting the tongue, insert, if possible, a piece of wood between the teeth, or a folded towel, and clear away the frothy discharge from the mouth. In an hysterical attack, strike the face and chest with a towel wet with ice-water.

### POISONS.

*General rule.*—As a general rule in cases of poisoning the patient should be made to vomit as soon as possible. Give at once a teaspoonful of mustard in a tumbler of warm water, or two teaspoonfuls of powdered alum in the same way.

*Poisoning from acids.*—When poisoned by acids give

* While coming out of the fit the hysterical patient will frequently pass a large amount of urine.

alkalies, as a solution of carbonate of soda in water, or lime water ; magnesia or chalk may be given, also strong soap-suds with plenty of water afterwards.

*From alkalies.*—When the alkalies, as caustic potash, soda or ammonia, have been taken by mistake, acids should be given, vinegar and water, lemons, oranges ; give later olive oil.

*Opium.*—The first thing of importance in the treatment of poisoning from opium, is to give an emetic ; after vomiting give strong coffee, and, if possible, do not let the person sleep. Strike the soles of the feet, walk him about, do anything to arouse him.

*Arsenic, copper, &c.*—In poisoning from arsenic, copper, and other metallic substances, give milk and raw eggs, afterwards mucilaginous drinks, as flaxseed tea.

## CHAPTER X.

### MONTHLY NURSING.

*PREPARATIONS of the room and of the patient.*—As soon as labor has commenced there are certain general preparations of the room and of the patient, to which the nurse must give her attention.

*Room.*—The room should be light, warm, and well ventilated, and, in private nursing, as retired as possible. But few persons should be admitted to the room, and only those whose presence is a comfort to the patient. Friends who cannot control their agitation ought not to be permitted to add to the distress of the patient. As a rule, it is desirable to have no more than one or two persons besides the nurse and physician in the room.

*Things needed.*—The nurse should have ready some sweet oil, or other mild emollient, for the physician's use, in examining the patient, also water, soap and towels. She must see that a supply of hot and cold water be ready when required. Ice may be demanded in case of hemorrhage, and should always be where it can be quickly obtained. The following articles will also be needed: scissors, and narrow silk or linen tape, for tying and cutting the cord; a blanket for receiving the child as soon as it is separated from the mother; a small bath-tub for bathing the child; a clean and soft sponge; white

castile soap ; a soft towel ; some pieces of old linen for dressing the navel ; a flannel bandage ; diapers ; a flannel petticoat ; a simple muslin dress, and a blanket to wrap about the child when dressed. The garments may be fastened by means of tapes, or a needle and thread may be found convenient for the flannel bandage, and the petticoat band. A change of linen for the mother, a bandage and shield pins, a clean sheet and draw sheet will be needed after the termination of labor.

*Bed.*—It is important that the bed for confinement be not too low, and that the mattress be hard and not very yielding. The mattress must be protected with the rubber cloth and draw sheet, according to directions which have already been given. A small quilt, or piece of a quilt, may well be used over the rubber cloth, and under the draw sheet ; this will help to absorb some of the fluids, and thus prevent their spreading. It is much the best way to have a clean bed to which the patient can be removed after the termination of labor, but this is often not practicable. The bed should not be against the wall, as it is desirable that the nurse be able to approach both sides of it.

During labor the patient will need some support for the feet and hands. The foot-board of the bed may answer for the feet, or a box or stool may be placed between the foot-board and the feet of the patient. A sheet fastened to the foot of the bed is generally found to be a convenient support for the hands, and furnishes something upon which she can draw during the latter part of labor.

*Precaution.*—During the progress of the labor the

nurse must take care that the bed-clothing get as little soiled as possible; also, in private nursing, the carpet may be spared any injury by spreading a rug over it on the right side of the bed. Under the bed, or near at hand, should be a vessel for receiving the after-birth.

*Preparation of patient.*—In preparing the patient for labor, the hair must be brushed, and is most conveniently arranged in two braids. The nurse should always give a simple enema even if the bowels have been moved within a few hours. In most cases the patient has a frequent desire to urinate, but where this is wanting she should be encouraged to make the attempt from time to time in the early part of labor. While the pains are still light, nourishment should be taken to keep up the strength. Soup and beef-tea are easily digested, and can generally be taken. Stimulants should be avoided.

*Pains.*—There are often slight pains occurring from time to time for several weeks before labor really begins. In the first stage of labor the pains are usually short, with long intervals between them. They are often accompanied with nervous shiverings and tremors. The pains are due to the uterine contractions, and the hand placed over the abdomen will feel the uterine walls grow firm beneath it. These pains have been called preparative, and they effect the dilation of the mouth of the uterus. They last for a longer time usually in the woman who has never before borne children.

The patient may at this time be dressed for the bed, but over the night-dress she may have on a warm wrapper and whatever else is necessary, so that she may walk

about sometimes between the pains if she feels so inclined. By this means the progress of the labor is slightly furthered, and the change of position and movement help to relieve the weariness of the patient. In the case of a woman who has already borne children, and especially if previous labors have been short, it may be advisable that she go to bed in the early stages of labor.

*Rupture of the membranes.*—It is also well in the case of a first labor to prepare the mind of the patient for the rupturing of the bag of waters and the escape of the fluid. Much soiling of the bed may be avoided by placing a large sponge or some old linen between the thighs and somewhat under the hips, to absorb the discharges.

*Second stage of labor.*—The pains of the second stage of labor are called expulsive. The mouth of the uterus is now fully dilated, the bag of waters is usually broken before this stage or in the early part of it, and the force of the uterine contractions is expended in pushing the child down out of the uterus and through the vagina. The pains are longer and more severe than the preparatory ones, and the interval between them gradually becomes shorter. Before this stage the patient should not be allowed to waste her strength in any bearing-down efforts, but now as the child is descending she can aid the contractions by bearing down with each pain, while she draws upon the sheet previously fastened to the foot of the bed. The patient will need to be encouraged to bear the pains bravely, and to help herself as much as possible, and not retard the progress of the labor by tossing about, or by crying out with the severity of her sufferings.

The pressure upon the rectum will often give the feel-

ing of a desire to empty the bowels, but the nurse must never allow her patient to get out of bed at this stage.

*How to relieve the pains in the back.*—The pains, both of the first and second stages of labor, are often accompanied by most distressing pains in the back. These may be much relieved by supporting the back with the hand at the time of the pains, or a hard pillow may be placed under the lower part of the back; or a towel may be passed under the loins and the ends held by two persons, one on each side of the bed, and by this the patient can be slightly raised, enough to give support to the back during the pains. The patient is often troubled by cramps in the thighs and legs, which are relieved by rubbing.

As soon as the head of the child begins to press upon the outside parts, the patient must desist from all her efforts at straining, as it is desirable that these parts be gradually stretched, to avoid, if possible, any rupture.

*What to do after the head is born.*—After the head is born, the nurse places her hand firmly over the uterus, and at the time of the next pain presses down from above while the body of the child is being expelled. This pressure favors the after contraction of the uterus and helps to prevent hemorrhage. There is usually a moment of rest after the head is born before the body is expelled. The nurse should have in the pocket of her apron, or close at hand, a pair of blunt-pointed scissors, and two pieces of cord, each about half a yard long, ready for use as they are required. The blanket to receive the child should also be ready.

*What to do after the birth of the child.*—After the cord has been tied, she will take the child from the physician

and lay it aside, well wrapped up, or give it into the care of some other person who may be present. There will usually be some large clots in the bed which are discharged after the child. These the nurse now removes, putting them in the vessel which is to receive the after-birth. Sometimes a good deal of liquid comes away at the same time. As much as can be is now wiped up to prevent its spreading, but the patient is not cleansed until after the after-birth has come away. This sometimes follows immediately after the child, but often not for half an hour or longer. During this time the physician gives his attention to the mother, and the nurse can take the opportunity to wash the child. She has previously got everything ready except the water, so that no longer time than necessary be taken now. By the time this is accomplished the mother will generally require the care of the nurse.

*Care of the mother.*—The soiled things must be removed from the bed ; a clean and dry part of the draw-sheet which is already on the bed can be put under the hips for a moment while the nurse bathes the parts with warm water, and dries them carefully with a soft towel. No more washing of the patient than is really necessary should be done at this time. The soiled clothing must be removed. But little moving of the patient should be done, and she must not be allowed to move or help herself in the least, or hemorrhage will be liable to occur. The bandage of the patient is put on as soon as possible, and pinned snugly so as to give support to the relaxed abdominal walls. A folded towel is placed so as to receive the discharges, and pinned to the bandage behind

and in front. If the patient is to be transferred to a clean bed, two persons will be required, one to lift from the shoulders, the other to lift the thighs and hips. If she is to remain in the same bed, clean, dry, and warm things must be substituted for the soiled ones.

*Look out for signs of hemorrhage.*—The patient should now be left to sleep. No one should be in the room but the nurse. All talking must be avoided. The nurse must, however, examine the patient from time to time, to see that she is not flowing too much. She should also notice whether the face of the patient becomes pallid, and the pulse weak. She can do this quietly without disturbing the patient. If the face and lips are pale and the pulse feeble, and the patient feels faint, though there are no signs of external hemorrhage, the head should be lowered and the hips slightly raised. The nurse must feel over the abdomen, pressing down deeply, so as to ascertain if the uterus has relaxed. In which case the bandage must be unpinned, and firm, circular rubbing over the uterus continued until it contracts down into a firm, hard ball, felt just above the symphysis pubis.

*Question of stimulants in faintness.*—There will sometimes be the above signs of hemorrhage, pallor and faintness, and no cause be found for it. The nurse can then only lower the head, and in the absence of the physician give a little stimulant cautiously while awaiting his arrival. He should be sent for at once, and, if near at hand, it will not be necessary for the nurse to give the stimulant, for it is only in an extreme case that stimulants should be given to a woman who has just been confined, and then they should be given in moderate doses,—as a

teaspoonful of brandy,—or they will be likely to prove a dangerous remedy. Nature demands that the woman rest after labor. The circulation is slackened, and the nutritive processes for the time diminished ; if now the circulation be excited by stimulants, there is reason to fear the setting in of fever. So when stimulants are given it is only when the circulation becomes so feeble that the woman is fainting, and we only want to give enough to prevent it. Sometimes there is a feeling of faintness from exhaustion from want of food, and it is relieved by milk. The latter is always a safe remedy.

*What can the nurse do if the physician has not arrived?*—It may sometimes happen that the nurse will find herself in sole charge of the patient at the time of the birth of the child. The child sometimes arrives sooner than it is anticipated, or the physician is by accident detained, and no other can be readily procured, which not infrequently happens in the country. We will, therefore, give some directions which may help the nurse at this crisis. We would, however, say here that no nurse should voluntarily undertake the entire charge of a midwifery patient. Certainly, no intelligent nurse who has a knowledge of some of the numerous accidents which are liable to occur would be willing to assume such a responsibility.

If, during labor, the parts about the vulva are rigid, hot and dry, they should be thoroughly lubricated with oil or vaseline.

*Care about the cord.*—As soon as the head is born it is important to see whether the cord be wound around the neck of the child. If it encircle the neck but once, it may be drawn slightly, so as to loosen it enough to

pass it over the head. If encircling the head more than once, the loosest coil may generally be loosened a little more, so that it will pass over the head, after which the others will follow easily. If this cannot be done, the coils may be loosened enough to prevent strangulation of the child, and their removal left till after the expulsion of the body.

As soon as the head is born an assistant should place her hand on the abdomen, over the uterus, and make firm pressure downwards at the time of the next pain, which usually comes in a minute or two after the head is born. This pressure, with gentle manipulation of the uterus, is continued by the assistant until after the expulsion of the after-birth.

*What to do if the body is delayed.*—The nurse should never draw upon the head, but if the pressure and manipulation does not expel the body, after waiting a few minutes, she may introduce into the vagina the first finger of the right hand, pass it along the back of the child, hook it under the arm, then draw gently but firmly until the shoulder passes over the perineum. The rest of the body will immediately follow.

The child should now be laid near enough to the mother to prevent any drawing on the cord, but at the same time in such a position that it shall not be choked by the fluids which have escaped or are escaping from the vulva. The pulse in the cord soon becomes irregular and finally ceases. It should then be tied in two places.

*Tying of the cord.*—The knot is the more firm if, in making the first tie, the end makes two turns under the part which is around the cord; for the second tie only one

turn is necessary. It should be tied firmly in two places, about an inch apart, and cut between them, about four or five inches from the child's abdomen. If the cord be thick and strong it should be tied as tightly as possible, but if it be slender and weak, care must be taken not to tie it so tight as to cut it. The cord is left thus long at first that there may be room for other ligatures in case of hemorrhage, and to guard against any part of the intestine of the child being included in the ligature.

*Care of the child.*—If the child breathes with difficulty the nurse should introduce the little finger into the mouth, to remove any mucus which may be present. Slapping the child on the back of the chest will help to clear the air passages. Shortly after the cord has been tied it should be examined to see that there is no hemorrhage from it.

The child, wrapped in warm blankets, may now be laid aside or delivered into the hands of an assistant, while the attention is given more particularly to the mother. It should not, however, be left long without another examination.

Gentle manipulation of the uterus through the abdominal walls, and downward pressure at the time of a pain will facilitate the separation of the after-birth from the uterus, and its expulsion from the uterine cavity. The nurse should in no case draw upon the cord.

*The after-birth.*—The after-birth is sometimes expelled from the uterus but not from the vagina. The uterus may then be felt like a hard ball through the abdominal wall. When this is the case the after-birth may be removed by giving the cord one or two turns over the

fingers so that it may be firmly grasped, and drawing it very slightly, while the other hand, introduced into the vagina, grasps the after-birth itself, and gently removes it. If it does not come away readily, no force should be used, as it is probably not entirely separated from the uterine wall. Nothing further must be done at this time than to keep up the external manipulation, unless there be excessive hemorrhage.

*Hemorrhage, how to arrest it.*—In case of violent hemorrhage, and the after-birth not yet removed, and no physician be present, the nurse, holding the cord firmly in one hand, must introduce the other into the vagina, follow up the cord and the after-birth, feel all around the latter until she comes to the place where it is attached; she must then separate it in such a way as to leave no portion of the after-birth attached to the uterus. After the after-birth has been expelled from the vagina, several turns of it should be made so as to twist slightly the membranes, as thus they are more likely to come away entire.

If, after the delivery of the after-birth there is excessive hemorrhage, it may usually be controlled in the following manner: Introduce several small pieces of ice into the vagina; wet the end of a towel in ice-water and quickly strike the abdomen of the patient; remove the pillows from under the head; the hips may even be slightly raised by a small hard pillow. Continue rubbing the uterus externally; this should be done until it is felt as a firm, hard ball above the symphysis pubis. The hand should remain over the uterus even a little longer,

to see that it remains small, or, in case of relaxation and enlargement, to manipulate as before.

The soiled quilt may now be removed from under the patient, a clean and dry one substituted, and the bandage put on and pinned quite tightly. She may then be left to rest for half an hour while the child is being washed and dressed. During this time she should be perfectly quiet, and not be allowed to talk.

*The child's bath.*—The water for the child's bath should be of a temperature of about 98°. Not using a thermometer, the nurse must be careful to see that it is neither too hot nor too cold.

The cord is now re-examined and again tied, this time about one and a half inches from the abdomen.

If there is much cheesy matter on the child it may be removed the more easily if it is first rubbed with a little sweet oil. The child may be wrapped around with a warm flannel before putting it in the bath, and still wrapped in this flannel, the left hand under the head, the right under the hips, let it be gradually lowered into the water. A clean soft sponge, and white castile soap should be used for cleansing the child. It should not remain in the bath over five minutes, and when taken out must be wrapped in a warm blanket and gently dried. Care should be taken not to chill the child by exposure. The nurse will at this time see if there are any deformities, especially if the anus and mouth of the urethra are open.

*To dress the navel.*—To dress the cord, take a piece of soft linen three or four inches in diameter, and cut a hole in the centre about half an inch in diameter, then dip it

in oil, put the cord through the hole, fold the linen over the cord, and lay the cord on the left of the median line. A small compress made of two or three folds of soft linen may then be laid over the whole, and the bandage put on, which will keep them in place. Then may follow the other garments of the child, which should be light, soft and warm.

The child should be upon the side rather than upon the back, and may be changed occasionally from one side to the other.

*After-care of the child.*—A little sweetened water may now be given the child if it is uneasy, and the mother be allowed a longer rest before nursing it.

*Nursing.*—Nothing further should be given the child till after the mother has had the first sleep, usually five or six hours after labor, when it may be put to the breast. The nipple may be moistened with a little sweetened water, and the child will the more readily take hold of it. It is important that the child have the first milk, as it acts as a mild cathartic, freeing the intestine from the meconium, the dark substance which passes from the newly-born infant, and which has collected in the bowel in the last few weeks before birth. After this the child should be put to the breast regularly, once in about two hours. If it be delicate and takes but a small amount of nourishment, it may be nursed every hour and a half, while on the other hand, if it be well and hearty, once in three hours is often enough for it to nurse in the night, or when it is sleeping.

If the mother is in good condition, nothing further will be required by the child until the appearance of the

teeth. Some nurses and some mothers will be anxious that the child have an early dose of oil, and others will suggest various other doses with which they would combat or ward off an imaginary evil. But all these things are not simply useless, they are harmful, and tend to disorder the digestion.

The child should be put regularly to the breast even though but little milk be secreted; the glands are by this means stimulated to further secretion. If the appetite of the child seems not to be satisfied with what it obtains from the mother, after each nursing it may be fed with a little milk and water, slightly sweetened. A preparation of one part of milk to two of water is very suitable for the new-born infant. This feeding will not usually be necessary for a longer time than one or two days.

The healthy child may be bathed daily, immersing the body in warm water. Two minutes is long enough for it to remain in the water. Care must be taken to cleanse the child thoroughly at the time of the bath, and to dry it well afterwards. Where this is carefully done all chafing may usually be avoided, and no occasion offered for the use of the powder in which so many nurses delight.

*Powder often injurious.*—Powder, as it is often used, is injurious to the delicate skin of the child. The skin is provided with pores which Nature intended should be kept open. The æration of the blood takes place through the skin as well as through the lungs, when the pores are not obstructed by powder or dirt. If the surfaces become chafed, in spite of all the care which has been used, they may be dusted with a little powder to prevent any friction, or, better still, a piece of soft linen smeared

with mutton-tallow may be laid against them. Bathing with very diluted starch water is also useful. Equal care must be taken in cleansing the child after the diapers have been soiled. Diapers which the child has wet should not be dried for use a second time. The fresh diapers should be previously warmed before putting them on a young child. Several may be kept ready for use wrapped around a bottle filled with hot water, where there is no other means of warming them.

For the first five or six days the navel must be dressed as at first, or until the cord falls off, which is about this time. No force must be used to remove it, but it must be left to come away of itself. For a few days after it has fallen off a little piece of oiled linen and small compress may be laid over the navel.

*Care of the mouth.*—The mouth of the child should be washed occasionally during the day with a little piece of soft linen and cool water. If the tongue becomes white or the mouth at all sore, it should be washed after each nursing. The child should not be allowed to suck cloths wet with sweetened water, or, if fed from the bottle, it should be taken away after the child has finished, and not be allowed to remain in the mouth.

*The eyes.*—If there be any discharge from the eyes, they must be carefully washed with a bit of soft linen. The nurse should bear in mind that this affection of the eyes is sometimes contagious, and sometimes becomes so serious that the eye-sight is lost. If only one eye is affected, she must be careful not to use the same water or cloth in washing the other eye. She must also take care not to convey any infection to her own eyes.

*The bowels.*—The bowels will move generally once, twice, or even three times a day. If constipated, a small suppository of soap introduced into the rectum will usually produce a movement; if not, the nurse may give an enema of warm water with a little castile soap. This is better than to run the risk of disturbing the digestion by giving oil.

*Care of the feeble child.*—The directions which have thus far been given have supposed the child to be born strong and well; but as it often happens that the reverse is the case, the nurse must be prepared to care for the weak and feeble child whose hold upon life is as yet very slender. If the child be weak, whether it be from premature birth, or other cause, it should be kept wrapped in cotton wool for the first few days of its existence, and hot bottles used as necessary to keep it warm. It will take but little nourishment at a time, and so must be fed oftener than the healthy child. A drop or two of brandy, or other stimulant, may be given with the food, but this will be prescribed by the physician, if necessary. The child may be of full term, large, and well developed, and, because of some pressure on the cord during labor, may, when born, be apparently dead. If the nurse be alone when such a child is born, her first efforts are to get it to breathe. She should first clear the mouth and throat of any mucus; then cold water may be dashed upon the face and chest, while the body is immersed in quite warm water. It may be laid upon its back and the arms lifted slowly up over the head, and back again to the sides, pressing firmly against the sides of the chest for a moment, the object being to expand the chest, as in the act

of inspiration. The nurse may fill her own lungs with pure air, and quickly blow into the mouth of the child, while the arms are raised and the chest expanded. When the child once begins to cry the lungs fill with air, and the threatened danger is averted.

In any case the new-born child must not be left long without looking to see that it is breathing rightly, but, if feeble, it must be watched still more carefully.

*To whom shall the nurse give her first attention?*—If the nurse chance to be alone, she may sometimes be at a loss to know to whom she must first give her attention after the birth of the child. If the child be breathing well, and the mother be having considerable hemorrhage, there can be no doubt that the latter needs her principal attention; but, on the other hand, the child may be feeble, and require her first attention, while the mother may not be in any danger; but again, both mother and child may seem to have equal claims upon her, and then she must do the best she can for each.

*Diet of the mother.*—For the first three or four days the mother is fed upon very light diet. As soon as she has had her first sleep she will be ready to take nourishment, which may consist of milk, gruel, a little toast and tea, or other like food. She will take but little food at any one time, and will require to be fed as often as every two or three hours. This should be brought to her at regular intervals without previously asking if she wishes it. If her wishes are consulted, she might decline taking food, but she will not usually refuse it when brought to her. All alcoholic stimulants should be avoided, as well as strong coffee and tea. This kind of diet is kept up

for one or two days; after that, beef-tea or chicken broth may be added, or even a little meat. In a day or two she may take cooked fruit, as baked apples, and even some fruits, as peaches and grapes, may be eaten without cooking. After the first nine days, if doing well, the patient can take almost anything she would like, acid fruits, vinegar, pickles, and indigestible food being still withheld.

The next day after confinement the nurse will give a vaginal injection of warm water containing a little carbolic acid. This should be done twice a day for about ten days. If there is any odor to the discharge the injections should be continued for a longer time. The discharge, at first consisting of blood and mucus and some materials which are thrown off from the uterus, because no longer of use, continues for three or four weeks usually, and sometimes longer.

*Use of catheter.*—If the patient does not pass urine within twelve hours after labor, the catheter will require to be used for a few times. The bladder should be emptied twice during twenty-four hours. Before using the catheter the nurse will do well to try placing over the bladder a sponge wrung out of water as hot as the patient can bear it, also to squeeze a sponge wet in quite warm water over the parts, so that a small stream of water is made to run over the mouth of the urethra. This will, in many cases, enable the patient to pass the water herself. It is well to keep the catheter in a bowl of disinfectant fluid during the intervals of its use. See page 22.

*The bowels.*—The bowels may move of themselves after

two or three days, but usually not without an enema. This should be given after three days, and repeated every alternate day as long as the patient remains in bed. During the first nine days the patient must not sit up to empty the bladder or the bowels.

If there has been a rupture of the perineum, and subsequent operation, it may be desirable that the bowels should not move for a week. In such a case the physician in charge will give the nurse directions when to give the enema.

*Care of the breasts.*—The nurse must see that the breasts are kept warm, and especially are not exposed to the air while the child is nursing. After nursing a cloth must be put over the breasts to prevent any milk which may escape from soiling the clothing. If it flows freely from the breasts a glass may be used to receive it.

The breasts sometimes become quite full and hard, making it difficult for the child to nurse, while they contain much more milk than the child can take. Here the breasts should be emptied, and the profuse secretion of milk slightly checked by bandaging the breasts between the times of nursing. A little tow may be used to fill up the space between the breasts, so as to make the pressure even, and then a wide, straight bandage pinned snugly over them. But this engorgement and all further trouble with the breasts may be avoided by putting on the bandage in season before they become full. The breast-pump may be required to empty the breasts if they are allowed to become engorged.

*Do not rub the breasts.*—The less handling the breasts

receive the better. The nurse should never rub them unless so directed by the physician.

The nurse is never called upon to decide whether the mother should or should not nurse her child; but where, for any reason, she is unable to do it, the breasts should be firmly bandaged the next day after confinement, so that the milk shall be kept from coming in. They should be kept thus firmly bandaged for a week.

*Care of the nipples.*—The nipples should be washed in cold water after each nursing of the child. If cracked, after washing and drying, they should be painted with collodion, or the compound tincture of benzoin, or anything else which the physician may prescribe. If care be taken with the nipples from the first, these troublesome fissures may be avoided, but once existing, they are very difficult to heal. If nursing becomes a painful process to the mother because of the soreness of the nipples, they should be protected by a rubber shield. If there is much milk in the breasts they should be supported, as by a piece of roller bandage which passes underneath the breast and over the opposite shoulder, or by a wide straight bandage around the chest, pinned tight enough that the patient feels the support.

The child should be put to both breasts at the same meal; they may be thus kept from becoming engorged.

*Bathing of the mother.*—Care must be taken in bathing the patient to expose only a small surface at a time, and to quickly sponge and dry it, using a good deal of friction to prevent all possibility of taking cold. The room should be quite warm during the bath; it is well to have

the temperature as high as 75° F. As a rule once in two days is often enough for the entire bath, but the hands and face may be washed twice daily, or as often as necessary, and the parts about the vulva cleansed carefully morning and night with carbolized water. As long as the patient is in bed she will usually experience great comfort from rubbing. It is especially important that the entire body be well rubbed at night. A good night's rest is often thus secured.

If the patient is doing well she may sit up for half an hour on the tenth day; afterwards this time is gradually increased according to her strength. Care must be taken that she does not feel any chill when she first leaves the bed, also when she first goes out, which, under the most favorable circumstances may be about the third week.

*Importance of ventilation.*—The observations which have been made on ventilation should be carefully followed by the monthly nurse. Pure air is never more necessary than in a case of this kind. It is important both for mother and child. All soiled clothing from the bed, mother and child should be taken at once from the room. While a sunny room is desirable, the light must be modified by curtains for the sensitive eyes of the newborn child.

*Artificial feeding of the child.*—If the mother does not nurse the child it may be fed with cow's milk, using for the first month one part of milk to two of water, and about a half-teaspoonful of sugar to a half-tumbler of milk thus diluted. In the city many children will thrive well on condensed milk. One part of condensed milk to

ten of water is sufficiently strong for a child during the first month.

When a child is artificially fed the greatest care must be taken to keep all the utensils clean and sweet. The simplest kind of a nursing-bottle—a plain bottle with a rubber nipple—is the best. Anything more complicated is more difficult to keep clean. When the child is being fed the bottle should be held by the nurse, and not left in the mouth while she attends to other matters. The milk may flow too fast and cause strangulation, or the nipple is liable to fall out of the mouth, and the child go to sleep without having taken sufficient nourishment.

If the child does not have the first milk from the mother, which is laxative in character, and if the bowels do not move freely within twelve hours after birth, the nurse may give it a teaspoonful of sweet oil, or a third of a teaspoonful of aromatic syrup of rhubarb.

*Stomach-ache.*—To relieve the pains in the stomach and bowels which afflict many little babies in a greater or less degree, and which are generally due to flatulence, the nurse may give it a little anise or fennel-seed tea. The cries of a young child are not always indicative of suffering. The nurse will generally be able to distinguish the cries of pain from those of hunger.

*Sleep.*—During the first few weeks the healthy child does little but nurse and sleep. If it nurses the mother, if not carefully watched, it will contract the habit of falling asleep with the nipple in its mouth, and soon get in the way of going to sleep in no other way. It will always stop to rest after sucking a few times, but the little naps which are allowed it must be of short duration,

or it will prolong one meal until about the time for another. The child should be taught to sleep by taking it from the breast, after its hunger is satisfied, and laying it in the crib. The nurse should not accustom the child to being rocked in her arms or in a cradle.

## CHAPTER XI.

### NURSING OF SICK CHILDREN.

*NECESSITY of habits of observation.*—The habit of careful observation, so valuable in the nurse at all times, is especially necessary when she is called to the care of sick children. Older people can describe many of their symptoms, so as to guide the physician in their treatment, but the report of the nurse who has used her eyes to the best advantage is of the greatest assistance in the case of a sick child.

*First signs of illness in a sick child.*—The first manifestation of any derangement of health in the infant or young child is very apt to be restlessness at night. The countenance, ordinarily so calm and placid in sleep, may be seen to be disturbed; the contracted brow, and the occasional workings of the features, express discomfort; or, the child may toss and turn uneasily from side to side, and sometimes cry out as if in pain; or, after a period of uneasiness, it may waken with a scream, and lie awake for some time, and the nurse find difficulty in soothing it.

Again, it may be noticed that the child, which, when well, is in almost constant movement when awake, be-

comes more quiet, prefers to lie in the nurse's lap, or on the bed or couch, and takes little interest in the toys which usually give it delight.

*What can be learned from the cries of a child.*—Much can be learned from the cries of a young child. The baby cries when it is hungry, but these cries are preceded by premonitory grunts, turning of the head to the side, and workings of the open mouth as if in search of the breast, which failing to find, the cry is one of disappointment and grief, aggravated by the pangs of hunger. It is unlike the sharp and sudden cry of pain.

*Pain, how manifested.*—When in pain the features will be more or less contracted, and often the legs are alternately drawn up, and then suddenly straightened out, and held quite stiff for a minute. The cries continue until the pain is relieved. The pain sometimes seems to come on in paroxysms. The child will cry very hard for a few minutes, and then, after a short period of calm, will suddenly cry out as before.

When the nurse is convinced that the child is suffering pain, she should try to ascertain in which of the three great cavities of the body the pain is located—the abdomen, chest or head.

Pain in the bowels is accompanied by wriggling of the body, drawing up of the legs, clenching of the fists, and generally occurs before or after a movement.

In inflammation of the lungs or air passages, the cry is at the time of coughing, and for a little time after. In pleurisy, the child experiences sharp pain on coughing, or on any movement of the body.

With pain in the head, which comes from disease of the brain, the child gives a single sudden shriek.

Little children often suffer very severe pains from ear-ache, will cry loud and long, and cannot be comforted.*

There is also the irritable cry of general uneasiness, which may generally be quieted by soothing treatment.

*Expression of the face.*—The expression of the face varies somewhat in different diseases. In diseases of the stomach and bowels there is apt to be paleness and contraction about the mouth ; the nostrils often dilate with each inspiration in diseases of the chest; in diseases of the brain the eyes and upper part of the face are more apt to be affected ; but in severe pain in any locality the whole face is likely to express it by its contortions.

*Posture, and movements.*—The positions which the child seems naturally to take should be noticed, whether it lies on the side or on the back, whether it seems to prefer to have the head elevated, whether it keeps the head quietly in one position, or turns it restlessly from side to side, or is inclined to burrow it in the pillow. The hand is frequently carried to the head in head-ache or ear-ache, and to the mouth when the teeth are giving pain.

*Skin.*—The temperature and color of the skin, its dryness or moisture, its smoothness, or the presence of any roughness or swelling, are points which may indicate health or disease.

*Advantages of a warm bath.*—When a child begins to

* Apply hot flannel to relieve the ear-ache of children. Do not use poultices. Avoid putting anything in the ear except by the advice of the physician.

be fretful and uneasy, and to manifest some of the first signs of disturbance of the health, there are many advantages to be gained from putting it at once in a warm bath. The temperature of the body is very apt to be elevated from a slight cause, and the child seems hot and feverish, and serious illness is apprehended. The change which the warm bath will produce in these symptoms is often very great. It lowers the temperature, thus quieting the sensitive nerves of the skin; it relieves the pains of colic by relaxing muscular spasm, and the child falls into a calm and restful sleep, and often when it wakens all uncomfortable sensations will have vanished. Again, if the child has contracted any of the eruptive diseases to which young children are liable, it will generally be made manifest, as the heat and moisture tend to bring out the rash.

*Bath, how given.*—The water should be warm enough to feel comfortable to the child. After two or three minutes a little more hot water may be added. The bath should be given in a warm room, better before an open fire in cool weather, all possible exposure from draft or other source being guarded against. The child may remain in the bath about five minutes, and then be taken out and wrapped in a warm blanket. Hold it in this for a few minutes, while the blanket absorbs some of the moisture, and then substitute for the damp blanket a warm and dry one. But little further drying will be necessary, and the night-gown, previously warmed, can be put on, and the child will probably now enjoy a refreshing sleep.

The physician will sometimes order the cold bath

when the fever is high. By this means the temperature of the body may be brought down several degrees. Unless the nurse has received special orders about the time of the bath, she should not keep the child in the water over five minutes. The attempt should not be made to bring the temperature of the body down to normal, because it will still continue to fall after coming out of the bath, and if this decrease should go on after the normal standard has been reached, there would be great danger of collapse—by which we mean the nervous system becomes so weakened by the change from a high temperature to one below normal, that reaction cannot be established. The temperature continues to fall, and death is the result.

*Some points in regard to fever.*—When the child is suffering from fever it derives the greatest comfort from the warm bath ; sponging of the body in tepid water is also beneficial, but the immersion generally gives the most relief. This may be repeated several times a day when the skin becomes very hot and dry, and the child may be kept wrapped in blankets instead of dressing it, or, at most, only a single garment may be put on. Dressing is a process which children are not apt to enjoy under any circumstances, but which becomes a great trial if persisted in when they feel weak and fretful from sickness.

When the child is hot and feverish it will will be very thirsty, and though it should not ask for water, the nurse should give it a little at a time and frequently, as a teaspoonful every ten or fifteen minutes if it takes it eagerly. She may also give it now and then a bit of

ice. The room should be well aired, and not too warm. The diet should be light, no solid food being given, except with the consent of the physician. A small quantity taken frequently is much better than a larger amount at longer intervals, for the digestive powers are weakened, and if too much work is put upon them, alarming symptoms will often manifest themseives. There is nothing better than milk to give sick children, and they are almost always fond of it, and may usually be allowed to satisfy themselves. Sometimes the nurse may notice that they drink it greedily, but vomit it almost immediately after. The thirst from which they are suffering makes them take it eagerly; less milk should then be given them, and it is also necessary to give it more diluted.* Bits of ice given frequently will relieve the thirst.

*Eruptive diseases.*—There are various eruptive diseases which usually attack infants and young children, and from some of which comparatively few children escape. These are measles, scarlet fever, chicken pox, and certain rashes. From the first two of these are dangers to be apprehended, of which the nurse should be aware, that she may take care to avoid them.

*Measles.*—In measles inflammation of the lungs and air passages are feared, so in this disease the greatest care must be taken to guard against exposure. Drafts of air are particularly dangerous. The temperature of

* If a child throws up milk some time after it has been taken, which is not curdled, it shows that the digestion is impaired, for it would be full of curds if it had been acted upon by the gastric juice.

the room should be kept at about 70° F. It should also be well ventilated. If necessary in ventilating the room screens may be used to protect the patient from draft. While the child must be kept warm, the clothing must not be made burdensome. The eyes are often left weak after measles, and to avoid this the room should be kept only moderately light. During the fever the diet should be light—milk, arrowroot and gruel being the chief articles allowed. Only a little cold water should be taken at a time, but the patient may drink freely of hot lemonade, and certain teas—as flaxseed and saffron. When the fever and eruption have nearly disappeared, broths may be added to the diet; boiled rice with milk, a baked apple or potato may be eaten, and the ordinary diet gradually resumed when the symptoms have entirely disappeared. But the child must still be kept in the same room, though feeling quite well, for a few days, and if the weather is at all cool a longer time yet must elapse before it can be allowed to go out of the house.

*Scarlet fever.*—The same general directions as to temperature, ventilation and care against exposure which have been given for measles, are equally important in scarlet fever. If the fever is high, and the child complains of heat, the temperature of the room may fall a few degrees, the object aimed at being that the child shall feel no chill. After the fever has subsided, and the child is pale and weak, the temperature may be maintained at 72°. Ventilation must not be forgotten. Pure air is here necessary to dilute the poisoned air of the room, which is loaded with the germs of the disease. A

screen should be placed around the bed to protect from draft, and two opposite windows, or a window and a door, should be constantly open, and the most thorough ventilation secured. Any feeling of chill the nurse must guard against, even three or four weeks after the child is first taken sick.

The diet, though usually somewhat more stimulating than in measles, will consist at first principally of milk, and the preparations of milk, and as the symptoms improve may be varied about the same as in measles. The same care must be used to keep the patient in the house for a long time, a month at least, after what seems a mild case of scarlet fever; for it has been noticed that dropsy, one of the diseases which the physician most dreads in scarlet fever, occurs even more frequently after a mild than after a severe case.

*Precaution.*—Measles and scarlet fever being contagious diseases, the patient should be isolated, and no one allowed in the room except those who have the care of the child. It should be remembered that the poison is often carried in the dress to other children who do not come near the room. Too much care cannot be taken not to spread either of the diseases, and especially scarlet fever. [See Prevention of Contagion, p. 20.]

*Diphtheria.*—Diphtheria is a very dreadful disease affecting the air passages. All the precautions which have been given in the rules laid down for the prevention of contagion (see page 20) are never more necessary than in this disease.

The discharges from the nose and throat are loaded

with the infectious germs. Rags should be used for these discharges, which should be immediately burnt.

One of the after effects of this disease is to produce more or less paralysis of the muscles of the throat, interfering with swallowing. This must be remembered after the patient has become convalescent, and food be given finely divided and in small mouthfuls, for death sometimes results from choking after the patient has nearly recovered.

*Important points in diseases of the lungs and air passages.*—Chilling of the body from insufficient clothing, too low a temperature of the nursery, or from exposure at the time of the bath, is the cause of most of the trouble arising from disease of the lungs or air passages. This cause is one which can usually be avoided with a little care. Remember then, the maxim, that prevention is better than cure, and study to protect the children from those injurious influences which may lead to serious results. Those who have the care of young children do not always realize that they are responsible for most of the sufferings of the little people from sickness. If we would not willingly expose ourselves to sickness, can we too greatly condemn or too religiously avoid the carelessness which would cause a helpless baby or child to suffer?

A cold is thought to be a slight thing, yet since one cold makes the way easier for another, it should not be so considered. A cold in the head is a great inconvenience to a nursing baby, interfering with its nursing sometimes to a serious extent. The sleep also becomes restless and disturbed. The warm bath will be found of

benefit, after which the child must be kept warm. The nostrils may be lubricated with oil by means of a camel's hair brush. Very young children with a cold ought to be confined to the house for a few days, unless the weather be very mild, when they may go out during the middle of the day. If there be any feverish symptoms, the child should remain in the house. The warm bath, the modification of the diet according to the rules for fever, and suitable clothing, will usually be all the treatment necessary.

*Croup.*—Croup is a very alarming disease. There are two forms of the disease, usually called true and false croup, and though the symptoms of each are alarming, one is much less dangerous than the other. It is this latter form, the false croup, to which so many children are subject upon slight exposure. In either case the attack comes on so suddenly that it is very important that those who are with the child know how they may relieve the distressing symptoms while anxiously waiting the arrival of the physician. These symptoms consist of a loud, barking cough, the voice becoming hoarse or whispering, and the breathing harsh and difficult. The child is really in danger of being suffocated. To a child two years old the nurse may give at once twenty or thirty drops of syrup of ipecac, and repeat it in ten minutes if the child is not relieved. The warm bath is also useful, and the foot-bath with mustard. The room should be warm, and the atmosphere may be made moist by keeping a kettle of water boiling on the fire.

Care should be taken with the diet of a child who is subject to croup. It should never be allowed anything

but simple and easily digested food, the evening meal especially being light, consisting principally of bread and milk.

In any inflammation of the lungs or air passages the child should be kept in a room the temperature of which should never be allowed to fall below 70° F., but should ordinarily be higher than that. Flannel should be worn next the skin, and all exposure must be carefully avoided for a long time. To relieve the thirst, which will often be very great, a little water should be given frequently. The diet, which should always be light, will be prescribed by the physician. When there is any fever it is better to keep young children in bed; infants will want to be held sometimes in the lap, but they should be kept in bed the greater part of the time, and older children should be kept in bed though not very sick. A warm gown may be put on over the night dress, and they can amuse themselves, if so disposed, with books and toys.

*Diseases of the stomach and bowels.*—Most of the diseases of the stomach and bowels take their origin from improper diet. Indigestion generally shows itself in an infant in a change in the stools. In health these are yellow, and of a uniform consistence, but one of the first signs of incomplete digestion is the appearance of white clots, the cheesy part of the milk which has not been digested. The passages soon become more or less green, and if the trouble is not arrested, they become thin and watery, and the number of passages becomes increased to four, six, or eight in twenty-four hours.

Any of these symptoms show that the food is not in proportion to the digestive powers. If the disturbance

is slight, a diminution in the amount of food, diluting the milk, and giving less at a time, may enable the child to digest what it takes. If the trouble occur in a nursing child who is at the same time taking other food, it should be restricted to the breast, unless the supply of milk be entirely insufficient. In warm weather infants need a drink of water now and then to make up for what they lose through perspiration. If the infant be bottle-fed, the trouble may have arisen from some carelessness about the food given it, or the utensils may not have been properly cleansed, and the milk thereby have been made sour.

When children are teething it is often necessary to make their diet lighter than ordinary.

In the hottest weather a frequent cause of the diarrhœa is the increased heat, which irritates the sensitive nerves of the skin, and finally exhausts them. This impression is transmitted to other parts of the nervous system, and the nutritive processes of the body are slackened, and the powers of digestion diminished. It is then that sponging of the body frequently in the course of the day is of the greatest benefit. It acts as a tonic to the exhausted nervous system. The bath, if repeated several times during the day, should be of short duration.

On the occurrence of diarrhœa in older children, the diet should be at once modified. Meat and vegetables should be discontinued; the food taken should be of the simplest kind and that which is most easily digested. The milk should be boiled, and may be thickened with arrowroot, rice

flour, or common wheat flour. Light broths may be allowed. Fruit should not be taken.

Children who have diarrhœa should not be cut off from out-door air in pleasant weather. Infants may take their accustomed exercise, but older children must be kept more quiet. They must also be suitably clad. Even in hot weather, flannel, if thin and soft, will not usually be uncomfortable; the gauze shirts should be worn, if nothing warmer is desired, though while sick a little warmer clothing than ordinary will not be burdensome.

In the more severe troubles with the stomach and bowels the physician will give very careful directions, which the nurse will follow with exactness. Rest and quiet are of the greatest importance. The child must be kept in bed; the horizontal position is better than the sitting posture, though the latter may be preferred. Fretting and worrying must not be allowed. The nurse must see that the child keeps warm. If the hands, feet, or nose become cool, the body should be wrapped in warm blankets; hot bottles may be put to the feet, and hot flannels appplied over the abdomen. Not much water should be taken at a time, but enough to quench the thirst may be allowed. When the child becomes better the diet may be increased, but with moderation.

*Constipation.*—Constipation is much less common among children; yet it is sometimes found. It may however usually be controlled by a proper attention to the diet. If existing in a nursing child, the mother should eat laxative food, or if this does not suffice, a little oatmeal gruel, strained and very thin, may be given to the child.

In older children oatmeal gruel, taken especially in the morning, and an avoidance at all times of concentrated foods, plenty of out-door air and exercise, will be all that is necessary in most cases. When a movement of the bowels is desirable, an enema is better than purgative medicines, for it should be remembered that the after effect of most purgative medicines is constipating, and they should therefore be avoided if possible. Rhubarb is less objectionable on this account than many other substances.

*Diseases of the nervous system.*—In any disease of the nervous system there is increased susceptibility to impressions; this is sometimes so great that a child is thrown into convulsions upon sudden movement. In disease of the brain there is increased susceptibility to light and sound. The room must therefore be kept quiet and darkened. The child must be moved as little as possible, and, when necessary, with the utmost gentleness. No quick or sudden movements should be made near the child. Loud talking should not be allowed in the room. The nurse should observe what things seem to disturb the child, and avoid them, if possible. Cleanliness must not be omitted; but a part of the body should be sponged at a time, and softly dried, with as little annoyance to the child as possible.

*Convulsions.*—Some children are liable to convulsions from derangement of the digestion and other causes. They occur not infrequently when a child is teething. The attack is often preceded by involuntary movements of the mouth or eyelids; then the eyes become fixed and the body rigid; the breathing is irregular, often

suspended for a few moments, and the face and surface of the body becomes dark red or livid. This condition is generally quickly followed by twitching or jerking of the limbs, and more often the arms than the legs commence a series of short, rapid movements ; there are also twitchings of the muscles of the face.

Upon the first sign of the attack the nurse should prepare a warm bath for the child ; the clothes should be at once loosened, and entirely or partially removed, and the child immersed in warm water ; at the same time cold water may be applied to the head. The child may be kept in the bath ten or fifteen minutes, if the convulsions continue so long, more hot water being added as necessary to keep the temperature at about 98°. After the bath, wrap the child in a warm blanket for a short time. The attack may be repeated, in which case the warm bath should be used as before. Quiet nursing is of the utmost importance in the after treatment.

*St. Vitus' dance.* — An irritable condition of the nervous system sometimes shows itself in convulsive movements of different muscles of the body, known as St. Vitus' dance. These movements are generally increased by emotion, or fatigue, also by the consciousness that they are observed ; hence, in the care of such a child, all causes of agitation should be avoided. It should not be allowed to play much with other children. It should, however, have cheerful surroundings, plenty of out-door air, and exercise, but not enough of the latter to get too tired. Hygiene is an important element in the treatment.

*Paralysis.*—Paralysis is an affection of the nervous

system which sometimes occurs in young children. Those who are so unfortunate require almost constant care from the nurse that they do not suffer in their general health from lack of air and exercise. They should be kept much in the open air, and systematic friction must be used with the affected part, which, by increasing the circulation, that is always somewhat diminished, helps to keep up the nutrition and prevent wasting. The temperature of the paralyzed limb is usually a little lower than that of the rest of the body; it should therefore be more warmly clothed.

*Diseases of nutrition.—Rickets.*—Rickets is a disease of nutrition, caused principally by a lack of suitable food in infancy and early childhood, and aggravated by unhygienic influences, as impure air or water, and unwholesome and filthy surroundings. The occurrence of too frequent pregnancies in the mother is a common cause of rickets among children. This cause acts upon the child before birth—the mother being weak and already unable to nourish the child, and after birth the milk is poor in quality and incapable of supplying the wants of the system. In this disease the bones of the body are imperfectly developed. They contain less of the salts of lime, and remain soft and easily bent long after they ought to be quite hard and well formed. Children with this disease are slow to begin walking, and they should not be encouraged to walk too soon, for, as the bones are soft, they easily bend under the weight of the body, and the child soon presents the deformity of bow-legs. To guard against other deformities, the child must not be allowed to sit up long at a time, and when lying down,

should rest upon a firm, smooth mattress, with the head not much elevated. The child should be suitably and warmly clad, and should be taken much into the open air and sunlight. Baths and friction of the skin are very important. The child must have nourishing diet, consisting of food suitable to the age, plenty of milk, and when the teeth have not yet made their appearance, it may be given a little beef juice ; and later, tender meat, rarely cooked. The diet should consist largely of animal food. Vegetables should be partaken of sparingly, and potatoes prohibited.

*Consumption.*—There are other conditions of defective nutrition. Perhaps the most common is found in the children of consumptive parents, who early show signs of delicate health. Such children need careful training to prevent the development of the dreadful disease—consumption. Suitable food and clothing, air and exercise are necessary, and especially regular and appropriate gymnastic exercises to counteract the defective development of the chest, which usually exists in these cases. All possible care must be taken not to expose them to the common diseases of childhood—measles and whooping cough.

### SOME POINTS IN REGARD TO THE HYGIENE OF CHILDREN.

*Diet.*—The nursing infant needs nothing except the mother's milk until the appearance of the first teeth. If the mother's milk seems insufficient to satisfy the child, it may be fed also on cow's milk from the spoon or bottle. Nursing must not be broken off too abruptly, and great

care must be taken to prepare the food of the child, so that it shall be suited to the strength of the digestive organs. It is generally found better to wean the child first from day nursing, while the mother still continues to nurse it once in the evening and again later in the night. In the morning we may give gruels or light porridge made with milk and water, and any of the following substances :—Arrowroot, rice flour, wheat flour dried in the oven, and oatmeal. Gruel from the latter should be strained. These may be varied according to the preference of the child, or the condition of the bowels : if inclined to be constipated, oatmeal is useful ; if relaxed, gruel from rice flour is better. Cow's milk with bread or crackers may also be given. Milk, however, is the principal article of food up to the age of eighteen months, and all through the period of childhood should enter largely into the diet.

The child should ordinarily be weaned at from twelve to fifteen months. By this time the stomach has become accustomed to other food, and will not suffer from the deprivation of the breast milk. It is desirable that a child under one year of age be nourished at the breasts during the hot months ; especially if living in the city it is often disastrous to make any change.

When the child has teeth enough to masticate it, it may be fed a little finely-divided, tender meat once a day, and even before this it may be given a little beef juice or animal broth.

The food of children should always be plain,—rich, or highly-seasoned food being prohibited. Tea or coffee should not be given them. Sugar is not injurious, used

with moderation, but should not be eaten too often, or it will be likely to diminish the appetite. Salt is the only condiment which children need, and this is really an essential article of food. Children will occasionally like a little salt in the water which they drink, and it often seems to increase the appetite when it is delicate.

The meals of children should be arranged with regularity, and they should not be allowed to eat between meals; only it must be remembered that they will require a larger number of meals than the adult. The evening meal should be light, consisting of bread and milk, or similar food.

*Air.*—Children need pure air, and plenty of it. Their sleeping apartments should always be well ventilated. As soon as an infant is a month old it may be taken out in the open air every day, for a short time if it be in the coldest season, for they are very susceptible to the cold, though well wrapped in flannels, but they may remain out much longer in warm weather. When children are old enough to engage in active sports, they may spend most of the day in the open air if the weather is pleasant, and the weather is seldom stormy enough to keep them in the house all day.

*Exercise.*—Children will get exercise if they are only allowed to do so, or if it is not made difficult or impossible by clothing which restrains all natural movement. It should not be supposed that little girls require less exercise than little boys.

*Clothing.*—Much could be said about the clothing of children, but all might perhaps be briefly summed up. Only a little common sense is needed to make children

very comfortable. The fashion of their garments should be such as not to restrain all free and natural movement, adapted also to the season and the weather.

*Baths.*—A cold bath every morning will render a child much less susceptible to external influences, and much less liable to take cold upon slight exposure. The infant should have warm baths, but these can gradually be made a little cooler, until at eighteen months or two years the child enjoys a cold bath. The bath is often a needless torture to a child, because not well managed. It should be short, of no more than two minutes' duration, and followed by friction until reaction is established, and the skin is glowing with warmth. Then the dressing should be accomplished as quickly as possible.

*Sleep.*—When the child is put in the crib from the first, without previously rocking, good habits of sleep are formed, and there is no further trouble. But sometimes when an infant has been sickly or delicate, those who have the care of it are suddenly surprised to find that it has contracted the habit of going to sleep in the arms or on the lap. If the child is seriously sick, principles must be laid aside, if necessary. If delicate, it may be drawn about the house for diversion and change of scene. Good habits are really more important to such a child than to one who is more robust. It seems a kindness to a delicate child to hold it in the lap, or to rock it to sleep, but it is easy to get it into the way of sleeping so lightly that it will waken when laid into the crib, or if it does not feel the warmth of some person beside it. Such sleep is much less refreshing than that of the child with well-regulated habits, and the result is the

child becomes constantly peevish and irritable. But if bad habits have been insidiously formed, they cannot be gradually broken off. At the proper time the child must be put in bed and left there. Its cries must be resisted, and in a few days it will fall asleep at once.

Young children need a great deal of sleep. They should go to bed early. Eight o'clock is not too early for children under ten years of age. Excitement should be avoided in the evening.

## CHAPTER XII.

### COOKING FOR THE SICK.

THE general principles which lie at the foundation of the art of cooking must be well understood by the nurse, but cannot be taught in the compass of this little work. Indeed some practical work in the kitchen under a competent instructor is necessary, and this branch of instruction is not neglected in the Bellevue Training School.

The nurse must know that in cooking meat it is important to lose as little as possible of its properties; but meat which is to be used for beef-tea, soups, or broths is treated in just an opposite way, for it is desired to extract the nutritious juices. Flesh of young animals is more tender but less digestible than that of animals of middle age. Mutton taxes the weak stomach less than beef. Pork is very difficult to digest, and therefore not suitable for the sick. Shell fish are generally regarded as indigestible; but oysters are nutritious, and are often well adapted for use in the sick room, and are quite easy of digestion if taken raw. Milk and eggs are very valuable foods; the latter should never be cooked until the white of the egg is hard. Eggs should never be boiled, but should be put into a dish of boiling water

and immediately covered. The dish should be removed from the fire, and the eggs will be well cooked in five minutes. Gruels require very thorough cooking.

The following is a table of the time taken to digest certain articles of food :—

| Hours to digest | One pound of |
|---|---|
| 3 | Meat. |
| 3½ | Cheese. |
| 2 | Milk. |
| 3 | Eggs. |
| 4 | Veal. |
| 4 | Fowls. |
| 4 | Pork. |
| 1 | Tripe. |
| 3½ | Bread. |
| 3½ | Potatoes, boiled. |
| 2 | Potatoes, roasted. |
| 4½ | Cabbage. |
| 2½ | Beans. |

RECEIPTS.

*Beef-tea.*—Cut the meat of a rump-steak into fine dice (having first removed all skin, fat and gristle), put it into a large-mouthed bottle, add a little salt, cork it tightly, put it in a saucepan of cold water, and let it boil for six hours ; then skim, strain, season, and serve it hot.

*Quick way of making beef-tea.*—Half a pound of beef chopped fine and soaked for ten minutes with a little salt in cold water, then put on the fire at the back of the

range, so that it may come very slowly to the boiling point. Let it boil three minutes, and then serve hot.

*Beef juice.*—Score and broil one minute pieces of beef about the size of the palm of the hand. Express the juice in a lemon squeezer. Add a pinch of salt, and before serving make it hot. One pound of beef makes three tablespoonfuls of juice.

*Sago and beef-tea.*—After washing thoroughly two tablespoonfuls of pearl sago, put it to soak in one-half pint of water, and then stew it in the same water for one hour. Mix with it half a pint of boiling cream and the beaten yolks of two eggs, and mingle the whole with a pint of beef-tea. This should be made just as the patient needs it, as soups with cream or milk are apt to curdle.

*Egg nogg.*—The yolk of an egg beaten, a tablespoonful of boiling water stirred into a wineglass of cream, and a tablespoonful of sugar. The white beaten very light and stirred in, and last of all, a half wineglass of rum and half wineglass of sherry with a little nutmeg on the top; serve at once.

*Nourishing mutton chop.*—Take *three* mutton chops and broil them together, so that the juice of the upper and under ones go into the middle one, which is the chop you are to give to your patient. You must always broil by a very bright hot fire.

*Plain boiled bread and milk.*—Put stale bread into a basin, the pieces of equal size; boil a pint of milk and pour over the bread, cover the basin with a plate for ten minutes, the bread will then be evenly soaked; a little sugar may be added.

*Oatmeal or Indian meal gruel.*—Mix the meal smoothly with cold water, and then stir it into *boiling* water, previously salted; a pint of water to two or three tablespoonfuls of oatmeal or Indian meal, accordingly as you wish the gruel thick or thin. Boil two hours.

*Caudle* is oatmeal gruel with raisins boiled in the water, and a little wine or brandy added; a little sugar and some spices.

*To poach an egg.*—Have ready a saucepan of boiling water; break an egg carefully into a tea-cup, so that the yolk is not burst, and put the tea-cup into the saucepan. Let it simmer for three minutes, and then take it out very carefully. Bread toasted lightly should be placed in the dish or plate, and the egg slipped upon it from the cup.

*White wine whey.*—Put half a pint of new milk, slightly sweetened, into a saucepan, and boil it; the moment it rises, while still on the fire, pour in a small glass of white wine. Let it boil up again, and set the saucepan on the side till the curd forms one lump; be careful not to stir it; the whey will pour off free from the curd.

*Arrowroot.*—A dessertspoonful of arrowroot will thicken about half a pint of water. Mix the arrowroot in a little cold water, then add by degrees the half pint of boiling water, stirring it all the time until it is of a pleasant thickness; boil for five minutes; put a little wine or brandy in it, sweeten with lump sugar, and grate a little nutmeg on the top. Boiling milk may be used instead of water.

Corn starch and farina may be made in the same way as arrowroot.

Tapioca, sago, and semolina should be soaked in cold water for five or six hours, then simmered in the same water until the grains are clear. Eggs and milk may be added to the tapioca, &c., and a little sugar, after which it may be boiled or baked.

### WEIGHTS AND MEASURES.

gr.j = 1 grain.
℈j = 20 grains = one scruple.
ʒ ss = 30 grains = half a drachm.
ʒ i = 60 grains = one drachm.
℥ ss = 4 drachms = half an ounce.
℥ j = 8 drachms = one ounce.

mj = one minim = one drop.
f ʒ i = 60 minims = one fluid drachm = one teaspoonful.
f ʒ ii = 2 fluid drachms = one dessertspoonful.
f ℥ ss = 4 fluid drachms = one tablespoonful.
f ℥ i = 8 fluid drachms = one fluid ounce = 2 tablespoonfuls.
f ℥ ii = 2 fluid ounces = one wineglassful.
Oj = one pint = 20 ounces.

## IMPORTANT THINGS FOR EVERY NURSE TO REMEMBER WHEN SHE GOES TO PRIVATE CASES.

Remember to be extremely neat in dress; to have the hair smooth, and caps and aprons clean; a few drops of hartshorn in the water used for *daily* bathing will remove the disagreeable odors of warmth and perspiration.

Never speak of the symptoms of your patient in his presence, unless questioned by the doctor, whose orders you are always to obey *implicitly*.

Remember never to be a gossip or tattler, and "always to hold sacred the knowledge which, to a certain extent, you must obtain of the private affairs of your patient, and the household in which you nurse."

Try to give as little trouble to the servants as possible, and make them feel that you have come to help them in the extra work that sickness always brings.

Never contradict your patient, nor argue with him, nor let him see that you are annoyed about anything.

Never *whisper* in the sick room. If your patient be well enough, and wishes you to talk to him, speak in a low, distinct voice, on cheerful subjects. Don't relate painful hospital experiences, nor give details of the maladies of former patients, and remember never to startle him with accounts of dreadful crimes or accidents that you have read in the newspapers.

*Write* down the orders that the physician gives you as to time for giving the medicines, food, &c.

Give an account of your patient to the physician in as few words as possible.

Keep the room bright (unless the doctor *orders* it darkened).

Let the air be as pure as you can, airing it from outside, "as windows are made to open."

Keep everything in order, but without being fussy and bustling.

The only way to remove dust is to wipe everything with a damp cloth.

Remember to carry out all vessels covered. Empty and wash them immediately, and keep "Girondin," or some other disinfectant, in them.

Remember, that to leave the patient's untasted food by his side, from meal to meal, in hopes that he will eat it in the interval, is simply to prevent him from taking any food at all.

Medicines, beef-tea or stimulants, should never be kept where the patient can see them, or smell them.

Remember "that we have no power of ourselves to help ourselves," but that God is ever willing to grant us strength to perform our duties, if we pray to Him in the name of our Blessed Saviour.

*NOTE.—See page* **25.**

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### TEMPERATURE AND PULSE.

To measure the temperature of the body the thermometer is used, and is placed usually under the tongue, where it should remain with the lips closed for five minutes. It is sometimes placed in the axilla, and sometimes, especially with young children, in the groin or rectum. The temperature taken in the axilla in the healthy person is about $98\frac{4}{5}^{\circ}$; taken in the mouth or rectum it is about one-half a degree higher. A higher temperature than this, shows a greater or less degree of fever.

The radial artery at the wrist is most convenient for counting the pulse. In healthy adults, the number of beats often varies, ranging usually from 72 to 78 per minute in different persons. The pulse is always a little more rapid in children.

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